Ontario Council on University Affairs

Sixteenth Annual Report March 1, 1989 to February 28, 1990

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Summary: Letter of Transmittal

Ontario

Ontario
Council on
University
Affairs

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February 28, 1990

The Honourable Sean Conway
Minister
Ministry of Colleges and Universities
22nd Floor, Mowat Block
900 Bay Street
Toronto, Ontario
M7A 1L2

Dear Minister:

I respectfully submit herewith the Sixteenth Annual Report of the Ontario Council on University Affairs, which covers the period from March 1st, 1989 to February 28th, 1990.

Each year Council is called upon to provide advice on the global funding required by the university system and the allocation of available funds among institutions; the eligibility of new graduate and undergraduate programs for funding; and upon matters referred to it which pertain either to one institution or the system as a whole. The threefold nature of Council's advisory responsibility - financial, regulatory, and ministerial references - is reflected in the Advisory Memoranda you received and responded to during 1989-90.

One major theme dominated Council's agenda in 1989-90, adjustment of the system of formula funding to take into account recent enrolment growth. During the spring Council consulted widely on an appropriate method of revision and in Advisory Memorandum 89-II recommended a procedure to the Minister. Using an estimate of the flow-through of two years of growth, Council calculated the number of BIU's and dollars required to accommodate and to make that expansion a permanent addition to the system capacity. Following the guidance of the Minister this growth was to be managed in a planned and co-ordinated fashion. The institutions were asked to indicate their plans to meet stated academic priorities. In the final stage, Council would reconcile these institutional plans in its recommended allocation. This advice was accepted in its entirety by the Minister in a letter dated June 15, 1989 (See Appendix). Thereafter the energies of Council were directed to the implementation of the corridor adjustment process.

During the year Council advised the Minister, as is customary, on the allocation of grants to the institutions for 1989-90 (Advisory Memorandum 89-III). Council also reviewed the methodology behind the distribution of the Bilingualism Grants and the Trent Differentiation Grant.

Every five years Council reviews the framework within which Graduate Program Planning will take place during the next quinquennium. Several significant revisions were made in Advisory Memorandum 89-V, the most important of which was the lifting of the ban on doctoral level programs that had heretofore been in place at five smaller institutions. As usual, Council also offered recommendations of the funding of certain specialized undergraduate programs, and graduate programs with the assistance of the Academic Advisory Committee. Council's annual advice on the number of Ontario Graduate Scholarships and their level was delivered in October.

Council's recommendation on the appropriate level of government support for the university system was rendered in July. The government response, which took the form of the regular transfer payment announcement in mid-December, fell short of Council's recommendation.

During the year Council published several discussion papers. Two documents, What the Council Heard About Fees (November) and What the Council Heard About Accessibility (February) recapitulated the main points of discussion during the annual spring hearings. These have not been included in this Annual Report but may be obtained in English and in French directly from the Council. A third document, A Discussion Paper on the Issue of the Establishment of Freestanding Secular Degree-Granting Institutions in Ontario (October), was drafted to inform discussion of this important matter.

May I say that Council is gratified at the prompt and generally positive response accorded its advice. A score-card of the extent to which our advice has been acted on has been included as usual, along with several of your letters of response to Advisory Memoranda. On behalf of my colleagues on Council, it has been a pleasure working with you to improve the quality and accessibility of higher education in the Province of Ontario.

Yours sincerely,

Dr. H.V. Nelles,
Chairman

Members and Officers of the Ontario Council on University Affairs 1989-90

Dr. Hashim Ahmed
(1992) Mississauga

Liliane Beauchamp
(1992) Sudbury

Jean-Michel Beillard
(1990) Ottawa

William Broadhurst
(1990) Toronto

Frank DeMarco
(1990) Windsor

Harry Eastman
(1990) Toronto

Suzanne Fortier
(1993) Kingston

Julie Gagnon-Gravelle
(1992) Ottawa

Peter George
(1993) Dundas

Colin Graham
(1993) Toronto

Evelyn Ruth Ham
(1992) Sudbury

Merrijoy Kelner
(1992) Toronto

Harriet Lyons
(1993) Waterloo

Susan McCartney
(1992) Thunder Bay

Lorna Jean Moses
(1992) Toronto

Henry (Viv) Nelles
(May 1992) Toronto
Chairman

Wendy Rinella
(1992) Kingston

Norman Sheffe
(1992) St. Catharines

Lilly Blezensky
Administrative Assistant
(to June 1989)

Rodger Cummins
Senior Policy Advisor
to Chairman

Sheila Lucas
Administrative Assistant
(from October 1989)

Diana Royce
Research Officer

Marny Scully
Research Assistant

Kathryn Shaver
Research Officer

Paul Stenton
Manager, Research and
Policy Analysis

Anna Uppal
Research Officer

(Members' terms expire on last day of February of the year indicated in parentheses)

Members and Officers of the Academic Advisory Committee 1989-90

Trudy Bunting
(March 31, 1992) Kitchener

Joan Gilchrist
(March 31, 1992) Komoka

Ken Kernaghan
(December 31, 1989) Fenwick
Chairman

Fernand Ouellet
(September 31, 1990) Toronto

Spruce Riordon
(March 31, 1992) Nepean
Chairman from January 1, 1990

Ann Saddlemyer
(March 31, 1992) Oakville

Denis Shaw
(March 31, 1992) Hamilton

Alden H. Warner
(March 31, 1992) Windsor

Introduction

Introduction

The Sixteenth Annual Report of the Ontario Council on University Affairs covers the period March 1, 1989 to February 28, 1990 and contains the full text of all Advisory Memoranda issued during the year. The report also contains a list of Council's public meetings for the year and the response of the Government to the recommendations made by Council.

Council's Advisory Memoranda

89-I New Undergraduate Quasi-professional, Special and Professional Program Funding

With this Memorandum Council initiates a new format for its annual recommendations on the funding eligibility of new quasi-professional, special, and professional undergraduate programs. Since 1982 OCUA has advised the Minister on the funding of new programs in these relatively expensive fields of study in accordance with Advisory Memorandum 82-VII, Undergraduate Program Approvals. Council, with the advice of its Academic Advisory Committee in some cases, considers the following in determining program funding eligibility: the proposed curriculum, academic quality, financial viability, projected enrolment over a five-year period, extent of co-operation between or amongst other post-secondary institutions, societal need and student demand for the program, whether or not the program duplicates existing programs, local and regional support for the program, how appropriate it is for the program to be offered at a particular university and whether the program should be funded even in a time of economic constraint.

Under new procedures adopted this year, Council has subjected different sorts of proposals to different degrees of analysis. **New Program Combinations**, created through the amalgamation of existing programs, options or concentrations which already have funding approval, have been merely noted and are listed in section one of this Memorandum.

The second section of the Memorandum examines those program changes which Council has given **Cursory Review**. Each report will include a brief summary of the proposed program, the date of Senate approval, and the reasons why the program merits a cursory review. Four categories of program proposals fall under the cursory review process:

a) Quasi-professional, special, and professional programs currently offered at the ordinary or four-year general level which have funding eligibility and for which an honours-level program is proposed, or vice versa;[1]

b) New quasi-professional, special or professional programs where an approved program is offered at the major honours degree level and the university wishes to offer the same program at the specialized honours degree-level, or vice versa, and where the new program is composed of a minimum of 75% of existing approved courses;

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[1] Four-year general degree programs receive the general program weight.

c) New quasi-professional, special and professional program options or concentrations combined with an existing approved program, where the new concentration does not exceed 25% of the program's total content; and

d) New programs created through a change in the name of an approved program where 25% or less of the courses in the program are new.

Completely new quasi-professional, special, and professional programs, which receive the standard review by Council, are dealt with in section three. For these programs, fully developed submissions are required, responding to the ten criteria for funding eligibility listed in the aforementioned Advisory Memorandum 82-VII.

CONTENTS

1.0 NEW PROGRAM COMBINATIONS

1.1 Bachelor of Engineering Management in Materials Engineering and Management (BEngMgt), McMaster University

1.2 Bachelor of Engineering Management in Ceramic Engineering and Management (BEngMgt), McMaster University

1.3 Bachelor of Engineering Management in Metallurgical Engineering and Management (BEngMgt), McMaster University

2.0 NEW PROGRAMS: CURSORY REVIEW

Quasi-Professional and Special Programs

2.1 Agricultural Business Major (BComm), University of Guelph

2.2 Applied and Theoretical Linguistics (Honours BA), Carleton University

2.3 Drama and Theatre Arts (Four-Year General BA), University of Waterloo

2.4 Italian Language and Literature (Honours BA), University of Windsor

2.5 Leisure Studies (Honours BSocSc), University of Ottawa

2.6 Marketing Major (BComm), University of Guelph

2.7 Resources Management Major (BSc), University of Guelph

Professional Programs

2.8 Agronomy Major (BSc[Agr]), University of Guelph

2.9 Animal Production Major (BSc[Agr]), University of Guelph

2.10 Concentration in Computer Integrated Manufacturing in Mechanical Engineering (BEng), Carleton University

2.11 Concentration in Management in Civil Engineering (BEng), Carleton University

2.12 Crop Protection Major (BSc[Agr]), University of Guelph

2.13 Horticultural Sciences and Business Major (BSc[Agr]), University of Guelph

3.0 NEW PROGRAMS: FULL REVIEW

Quasi-Professional and Special Programs

3.1 Bachelor of Accounting (Honours BActg), Brock University

3.2 Business Administration (Honours BBA), Laurentian University

3.3 Concentration in Leisure Studies (BSocSc), University of Ottawa

3.4 Criminology (Honours BA), University of Windsor

3.5 Labour Studies (Combined BA), Brock University

3.6 Labour Studies (Honours BA, Double Major), York University

3.7 Management Economics Major in Industry and Finance (BComm), University of Guelph

Professional Programs

3.8 Aerospace Engineering (BEng), Carleton University

3.9 Biology and Pharmacology (Honours BSc), McMaster University

3.10 Environmental Engineering (BEng), University of Windsor

3.11 Health Administration (BHSc), University of Toronto

3.12 Library and Information Studies (BA), Lakehead University

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1.0 NEW PROGRAM COMBINATIONS

Council notes that the following three new program combinations have been created through the unification of existing approved programs in Engineering and Management at McMaster University.

1.1 Bachelor of Engineering Management in Materials Engineering and Management (BEngMgt), McMaster University

1.2 Bachelor of Engineering Management in Ceramic Engineering and Management (BEngMgt), McMaster University

1.3 Bachelor of Engineering Management in Metallurgical Engineering and Management (BEngMgt), McMaster University

2.0 NEW PROGRAMS: CURSORY REVIEW

Quasi-Professional and Special Programs

2.1 Agricultural Business Major (BComm)
University of Guelph
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee with respect to the proposed Bachelor of Commerce Major program in Agricultural Business (see Appendix A). Council notes that the new program is the result of modifications to an existing program in an area of strength at the University of Guelph. Council, therefore, believes that the new program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-1
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF COMMERCE MAJOR PROGRAM IN AGRICULTURAL BUSINESS AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BComm Major program in Agricultural Business at the University of Guelph be counted as eligible for funding purposes beginning in 1989-90 - the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

2.2 Applied and Theoretical Linguistics (Honours BA) Carleton University (Cursory Review)

On March 28, 1988, Carleton University submitted a request for a recommendation regarding funding eligibility for two new undergraduate quasi-professional programs: the BA Honours Applied Linguistics and the BA Honours Theoretical Linguistics. These programs result from modifications to an existing Honours BA program in Linguistics. In accordance with established procedures, Council circulated the proposals to the Council of Ontario Universities. Institutional responses indicated that there were no objections to the program.

Carleton indicates that the Honours Applied Linguistics stream was designed to take advantage of an area of strength within the Linguistics Department and to encourage students planning to become teachers of English as a Second Language (ESL) or French as a Second Language (EFL), to take courses specifically related to these careers. The Honours program in Theoretical Linguistics is merely a relabelling of the original Honours Linguistics program. No new courses are involved in the offering of these programs. The above modifications received approval from the Carleton University Senate on January 28, 1988.

Funding

Council is satisfied that these programs constitute the repackaging of an existing program and require no additional resources. Council believes that these programs should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council recommends to the Minister:

OCUA 89-2
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ARTS, HONOURS APPLIED LINGUISTICS AND HONOURS THEORETICAL

LINGUISTICS PROGRAMS AT CARLETON UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BA Honours, Applied Linguistics and BA Honours, Theoretical Linguistics programs at Carleton University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the upper years of the programs to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

2.3 Drama and Theatre Arts (Four-year General BA)
University of Waterloo
(Cursory Review)

On August 11, 1987, the University of Waterloo submitted the new, undergraduate quasi-professional Four-year General BA program in Drama and Theatre Arts for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities. Institutional responses indicated that there were no objections to the proposal.

The University of Waterloo indicated that the proposed four-year general degree program would be developed to complement existing three-year general and four-year honours degree programs in Drama and Theatre Arts. The differences between the proposed four-year general program and the existing honours program are minor. The four-year general honours program requires a cumulative major average of 70% as opposed to a 75% requirement for the honours program. Although a Senior Seminar course is not required, two additional courses must be taken in its place. The four-year general program will be based entirely upon existing courses. The program received Senate approval on December 15, 1986.

The program was developed in response to student demand for a four-year program of study, which did not include courses necessary for graduate school preparation.

Enrolment in the program is expected to be small. Two to three students per year are expected to enrol in the program for an eventual steady-state enrolment of six to nine students.

Funding

Council is satisfied that this program is based entirely on existing resources and has been developed in response to student demand. Council, therefore, believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-3
ELIGIBILITY OF ENROLMENT IN THE FOUR-YEAR GENERAL BACHELOR OF ARTS PROGRAM IN DRAMA AND THEATRE ARTS AT THE UNIVERSITY OF WATERLOO FOR 1989-90

THAT enrolment in the Four-Year General BA program in Theatre Arts at the University of Waterloo be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 1 with a weight of 1.0, as outlined in the Ministry's Operating Formula Manual.

2.4 Italian Language and Literature (Honours BA)
University of Windsor
(Cursory Review)

On May 12, 1988 the University of Windsor submitted the new undergraduate quasi-professional BA Honours Italian Language and Literature program to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities. Institutional responses indicated that there were no objections to the program.

The Honours Italian Language and Literature program provides an intensive, highly focused study of Italian language and literature. Completion of the degree requires twenty to twenty-four Italian language and literature courses, a significant increase from the sixteen courses required in the existing combined Honours program. At least 75% of the program is based on existing courses.

Council notes that Senate approval was received on May 21, 1987. Since the main impetus for the program has come from students currently enroled at the institution, the nature of this new concentration should not significantly affect the capacity within the system.

Funding

Council is satisfied that this program is based on an existing program at the University of Windsor. Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-4
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ARTS PROGRAM IN HONOURS ITALIAN LANGUAGE AND LITERATURE AT THE UNIVERSITY OF WINDSOR FOR FUNDING PURPOSES 1989-90

THAT enrolment in the Honours BA program in Italian Language and Literature at the University of Windsor be counted as eligible BIUs for funding purposes beginning in 1989-90 - the upper years of the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

2.5 Leisure Studies, Honours BSocSc University of Ottawa (Cursory Review)

On May 12, 1988 the University of Ottawa submitted the new Honours BSocSc program in Leisure Studies for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities. Institutional responses indicated that there were no objections to the proposal.

Specifically the proposed new program results from the renaming of an existing Honours BSocSc program in Recreology. No new courses are involved. This name change reflects the terminology currently used in the field.

The name change was approved by the Senate of the University of Ottawa on January 13, 1986.

Funding

Council is satisfied that only the name of this program has changed and that the new title more accurately reflects current usage in the discipline. Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-5
ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF SOCIAL SCIENCE, LEISURE STUDIES PROGRAM AT THE UNIVERSITY OF OTTAWA FOR FUNDING PURPOSES 1989-90

THAT enrolment in the BSocSc Leisure Studies program at the University of Ottawa be counted as eligible BIUs for funding purposes beginning in 1989-90 -the upper years of the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

2.6 Marketing Major (BComm) University of Guelph (Cursory Review)

On September 27, 1988, the University of Guelph submitted the new undergraduate, quasi-professional, Marketing Major, BComm program to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities. Institutional responses indicated that there were no objections to the proposal.

The proposed Marketing Major is a four-year Bachelor of Commerce degree program, administered by the Department of Consumer Studies, in the College of Family and Consumer Studies. The program is interdisciplinary and is composed of courses in writing and communication; mathematics, statistics and information technology; social science foundations; buyer and market studies; and marketing management. Through the selection of specific electives, students may incorporate an applied focus to the program in the following specializations: clothing marketing, retailing, food marketing, real estate and housing.

This program results from the repackaging of an existing program entitled "BASC in Consumer Studies with an Emphasis in Consumer Behaviour". The University of Guelph indicated that this former title created a great deal of confusion with respect to the program's objectives:

> the existing title conveyed a very confused and distorted image of the program and its intentions. This problem was exacerbated by the fact that the term 'consumer studies' used in many high schools is more closely related to the traditions of Home Economics than is the current undergraduate program at Guelph. The fact that the Department itself, and the College within which it is sited since 1903, was intimately linked with the development of Home Economics in Ontario, made it more difficult, if anything, to clarify the message without changing titles completely.[2]

The program was also renamed and revised as part of an overall planning strategy which emerged from the University's Report of The Task Force on Agriculture, which recommended the clarification of the business orientation of the activities within the Department of Consumer Studies.[3]

The proposed program is based substantially on existing courses. However five new one-semester courses have been added. The new Marketing Major requires few additional resources, will enable existing strengths to be utilized more productively, and will better meet the needs of students and employers requiring marketing skills.

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[2] University of Guelph, Proposed Marketing Major within BComm. Degree, Supplemental Briefing Notes, December 14, 1988, p.1.

[3] Ibid, p. 2.

The proposed modifications received Senate approval on November 15, 1988.

Funding

Council is satisfied that this program constitutes the repackaging of an existing program, involving minor programmatic modifications. Given that this new program is based upon existing strengths at the University of Guelph, requires very limited additional resources and creates a Marketing program more appropriate to the needs of students and employers, Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-6
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF COMMERCE, MARKETING MAJOR PROGRAM AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BComm Marketing Major program at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

2.7 Resources Management Major (BSc)
University of Guelph
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee with respect to the proposed Bachelor of Science Major program in Resources Management (see Appendix A). Council notes that the new program is the result of modifications to an existing program in an area of strength at the University of Guelph. Council, therefore, believes that the new program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-7
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE MAJOR PROGRAM IN RESOURCES MANAGEMENT AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BSc major program in Resources Management at the University of Guelph be counted for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

Professional Programs

2.8 Agronomy Major (BSc[Agr])
University of Guelph
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee with respect to the proposed Bachelor of Science (Agr) Major program in Agronomy (see Appendix A). Council notes that the new program is the result of modifications to an existing program, in an area of strength at the University of Guelph. Council, therefore, believes that the new program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-8
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE (AGRICULTURE) MAJOR PROGRAM IN AGRONOMY AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BSc(Agr) Major program in Agronomy at the University of Guelph be counted as eligible for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

2.9 Animal Production Major (BSc[Agr])
University of Guelph
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee with respect to the proposed Bachelor of Science (Agr) Major program in Animal Production (see Appendix A). Council notes that the new program is the result of modifications to an existing program in an area of strength at the University of Guelph. Council, therefore, believes that the new program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-9
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE (AGRICULTURE) MAJOR PROGRAM IN ANIMAL PRODUCTION AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BSc(Agr) Major program in Animal Production at the University of Guelph be counted as eligible for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

2.10 Concentration in Computer Integrated Manufacturing in Mechanical Engineering (BEng)
Carleton University
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee regarding Carleton University's introduction of a Concentration in Computer Integrated Manufacturing program in Mechanical Engineering (BEng) (see Appendix B).

Since this program builds upon existing strength within the Department of Mechanical Engineering at Carleton University and responds to a local and national societal need for specialized expertise in computer integrated manufacturing, Council believes that this program should be recommended for funding eligibility, even in time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-10
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ENGINEERING PROGRAM IN MECHANICAL ENGINEERING, CONCENTRATION IN COMPUTER INTEGRATED MANUFACTURING, AT CARLETON UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BEng program in Mechanical Engineering, Concentration in Computer Integrated Manufacturing, at Carleton University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 3 with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

2.11 Concentration in Management in Civil Engineering (BEng)
Carleton University
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee regarding Carleton University's new Concentration in Management within the Civil Engineering (BEng) program (see Appendix C). Given that the new Concentration will meet a societal need and student demand for engineering graduates with expertise in management and will not require additional resources, Council believes that the program concentration should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-11
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ENGINEERING PROGRAM IN CIVIL ENGINEERING, CONCENTRATION IN MANAGEMENT, AT CARLETON UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BEng program in Civil Engineering, Concentration in Management, at Carleton University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

2.12 Crop Protection Major (BSc[Agr])
University of Guelph
(Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee with respect to the proposed Bachelor of Science (Agr) major program in Crop Protection (see Appendix A). Council notes that the new program is the result of modifications to an existing program, in an area of strength at the University of Guelph. Council, therefore, believes that the new program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-12
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE (AGRICULTURE) MAJOR PROGRAM IN CROP PROTECTION AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BSc(Agr) Major program in Crop Protection at the University of Guelph be counted for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

2.13 Horticultural Sciences and Business Major (BSc[Agr]) University of Guelph (Cursory Review)

The Ontario Council on University Affairs has considered the advice of its Academic Advisory Committee with respect to the proposed Bachelor of Science (Agr) Major program in Horticultural Science and Business (see Appendix A). Council notes that the new program is the result of modifications to an existing program, in an area of strength at the University of Guelph. Council, therefore, believes that the new program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-13
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE (AGRICULTURE) MAJOR PROGRAM IN HORTICULTURAL SCIENCE AND BUSINESS AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BSc(Agr) Major program in Horticultural Science and Business at the University of Guelph be counted as eligible for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

3.0 NEW PROGRAMS: FULL REVIEW

Quasi-Professional and Special Programs

3.1 Bachelor of Accounting (Honours BActg) Brock University

On July 19, 1988 Brock University requested that Council consider for funding approval a new undergraduate quasi-professional degree in Accounting (Honours BActg). In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU). Institutional responses indicated that there were no objections to the program.

1. Proposed Curriculum

The Bachelor of Accounting program is four-years in length and is offered by the School of Administrative Studies. The program will replace the Honours Bachelor of Administration, Accounting Option (co-op) program.

The new program's curriculum was developed in such a way as to address the expanding body of accounting knowledge, the changing requirements of professional qualification bodies, particularly the Institute of Chartered Accountants of Ontario (ICAO), and the need for students to enhance communication, analytical and problem-solving skills. Required courses include Human Resource Management for Accounting Students, Marketing for Accounting Students, and Business Ethics. Year four of the program offers two streams: one designed for students intending to pursue the CA designation after graduation and the other designed for students intending to pursue the CMA designation after graduation. A co-op option is available.

2. Academic Quality

The program was approved by the Senate of Brock University on May 25, 1988.

3. Financial Viability

Council notes that no additional resources will be required to offer the program and, therefore, the Board of Governor's approval was not necessary.

4. Projected Enrolment

There are 110 students currently enrolled in the accounting major option of the Honours Bachelor of Administration program. These students are expected to transfer into the new program. The steady-state enrolment in the BActg program will be limited to 120 students.[4]

5. Co-operation with other Post-Secondary Institutions

No co-operation with other universities is planned.

6. Societal Need and Student Demand

Brock University indicates that the Honours BActg program was designed to meet the increased requirements being developed by the three professional accounting qualification bodies representing chartered accountants, certified management accountants and certified general accountants.

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[4] Letter from Dr. W.A. Matheson, Vice-President, Brock University, to Dr. Paul Fox, Chairman, Ontario Council on University Affairs, September 12, 1988, p. 1.

In support of the need for this program, The Institute of Chartered Accountants of Ontario stated:

> There is a need for this program from the points of view of its potential graduates and their potential employers...The proposed program is unique in that it is directed both toward offering the courses required by aspiring CA's and toward offering courses from the future professional accounting perspective. This perspective is distinct from the mixed learning environment which is reflective of most BComm-based programs, where the professional accounting focus is diluted...[5]

Additional information reinforced the notion that this program responds to the educational needs of the accounting profession in Ontario.[6]

Brock indicates that the societal need for graduates with an accounting specialization has been strong to date and that:

> In the recent past, demand for our co-op students from employers throughout Ontario has exceeded supply by 40 - 50%. Graduates from non co-op programs generally have little difficulty obtaining entry level positions.[7]

Brock notes that student demand for the existing accounting option is strong and that the introduction of the BActg program will likely lead to increased demand from students.

Council is satisfied that there is both a student demand and a societal need for this program.

7. Uniqueness

The Brock BActg program is unique in Ontario. The University notes that:

> The closest comparison would be the programs available in the Professional Accounting Stream, School of Accountancy, University of Waterloo. The BActg as a 4 year undergraduate program is not, however, a direct duplication of the Waterloo program. There are differences in the

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[5] Letter from Mr. P.G. Laflair, Director of Education-Planning and Development, The Institute of Chartered Accountants of Ontario, to the Ontario Council on University Affairs, January 25, 1989, p. 2.

[6] Ibid., Attachment, Check Mark, "Implementation Update: Improvements in CA-Education Programs", January 1989, Vol. 28, No. 2., p. 4.

[7] Letter from Dr. W.A. Matheson, Vice-President, Brock University to Dr. Paul Fox, Chairman, Ontario Council on University Affairs, September 12, 1988, p. 1.

humanities, science, social science and mathematics components.[8]

Council notes that this is the only accounting program currently offered in the province to require specific courses within the humanities.

Council is satisfied that the program meets the uniqueness criterion.

8. Local and Regional Support for the Program

Brock University states accounting program graduates have been in strong demand from local and regional employers and that this demand is expected to continue or increase for graduates of the new Honours BActg program. Support for the program has also been demonstrated by the numerous co-op placements made available to students by local and regional employers.

Council is satisfied that there is both local and regional support for the program.

9. Institutional Appropriateness

The proposed program is based on existing strength in accounting at Brock University and was developed in response to new professional demands.

Council is satisfied that the offering of this program is an appropriate endeavour for Brock University.

10. Funding in a Time of Constraint

Given the changing professional requirements for chartered accountants and the demonstrated societal demand for graduates of the program, Council believes that the Bachelor of Accounting program at Brock University should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-14
ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF ACCOUNTING PROGRAM AT BROCK UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the Honours Bachelor of Accounting program at Brock University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

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[8] Ibid., p. 2.

3.2 Business Administration (Honours BBA)
Laurentian University

On July 11, 1988, Laurentian University submitted the new undergraduate quasi-professional Honours Bachelor of Business Administration (BBA) program to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU). Institutional responses indicated that there were some reservations about the degree to which the program overlapped the existing BComm program at Laurentian.

1. Proposed Curriculum

The Honours Bachelor of Business Administration program can be taken on a full-time or part-time basis at the affiliated Colleges of Algoma, Nipissing and Hearst (in French), and by distance education in French only from the Laurentian campus.

The first two years of the program will duplicate Laurentian's existing Bachelor of Commerce program, while the third year covers essentially the same course content but in a mode appropriate for part-time or distance education study. The fourth year of the program permits students to choose up to 12 credits in place of business courses.[9]

BBA students who complete the first two years of the program will have the option of transferring to Laurentian's BComm program. Students in the third or fourth year of the BBA program will not be able to make such a transfer.[10]

The proposed program is based on the notion that a general liberal arts education, requiring exposure to disciplines other than business, is essential for a career in management and for the more balanced development of the individual.[11]

2. Academic Quality

The Honours Bachelor of Business Administration program was approved by the Senate of Laurentian University on June 16, 1988.

3. Financial Viability

Board of Governor's approval was not required of this program. The program will require few additional resources.[12] Council is satisfied that Laurentian University is committed to ensuring the financial viability of the program.

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[9] Letter from Dr. J.S. Daniel, President, Laurentian University, to Dr. H.V. Nelles, Interim Chairman, OCUA, January 19, 1989, p. 1.

[10] Ibid., p. 2.

[11] Laurentian University, Bachelor of Business Administration(BBA) Degree for the Laurentian System, July 11, 1988, p. 2.

4. Projected Enrolment

Total enrolment in the program across the Laurentian system is projected to be 106 students in 1989, increasing to 563 students by 1993.[13]

5. Co-operation with other Post-secondary Institutions

No co-operation with institutions outside the Laurentian system was indicated.

6. Societal Need and Student Demand

The development of the BBA program will meet a variety of regional needs for business education in the North Eastern region of Ontario.

The distance education component of the program, offered in French by Laurentian University, will meet a need for business education accessible to Francophones across Canada. The Federation of Francophones Living Outside Quebec and the Conseil de la Co-operation du Canada have both advocated the development of business programs for Francophones. The availability of the program at Nipissing College will enable students living in North Bay and surrounding area to meet the requirements of professional bodies such as the Ontario Association of Chartered Accountants, the Institute of Canadian Bankers and other professional bodies with "the least disruption to their home and work lives, while still obtaining a professional quality level of instruction in the required core courses."[14]

North Bay employers have indicated that the Nipissing program would also provide local opportunities for staff development and would enhance local training and development initiatives. Algoma College argues that the program will foster entrepreneurship in Sault Ste. Marie and surrounding area. The program will provide a local opportunity for business education and will keep many students from leaving the area to study business elsewhere. Algoma believes that this program will facilitate the diversification of the local economy.[15]

Le Collège de Hearst indicates that the program will better meet the need for professional business certification of its student population.

The common BBA program will unify, standardize, homogenize and rationalize the professional business offerings across the Laurentian system.

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[12] Ibid., p. 1.

[13] Letter from Dr. J.S. Daniel, President, Laurentian University to Dr. Paul Fox, Chairman, Ontario Council on University Affairs, November 4, 1988, p. 2.

[14] Ibid., p. 6.

[15] Ibid., p. 7.

Local student demand for the program at each campus is strong. Demand will originate from local high school students and from employed professionals who desire an opportunity for professional development.

Council is satisfied that there is societal need and student demand for the program.

7. Uniqueness

The program is not unique. However, this program is meeting regional needs for business education in both French and English in northern Ontario. Council believes that the duplication of existing business programs elsewhere in Ontario is justifiable.

8. Local and Regional Support for the Program

The program has the support of each of the local communities it would serve. The Laurentian component of the program has received a donation of $35,000 from the Fédération des Caisse Populaires de l'Ontario and has received an additional $500,000 through the Northern Distance Education Fund.

9. Institutional Appropriateness

The program is supported by existing strengths within the Laurentian University system in commerce (BComm) and business administration (MBA). The development of the BBA program has been fully supported by the Laurentian University School of Commerce and Administration. Council notes that Laurentian University has significant experience in the distance education mode through which a component of this program will be offered. Each of the affiliates currently offers the first two years of the Laurentian BComm program, on which the first two years of the BBA will be based.

Council believes that the development of this program is appropriate for the Laurentian University system.

10. Funding in a Time of Constraint

Given that the proposed Honours BBA program for the Laurentian University system meets the need of students and employers for full-time and part-time business education in a variety of regions of Ontario's north east, and few additional resources are required, Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-15

ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF BUSINESS ADMINISTRATION PROGRAM AT LAURENTIAN UNIVERSITY AND ITS AFFILIATED COLLEGES - ALGOMA, NIPISSING AND HEARST FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the Honours BBA program in Business Administration at Laurentian University and its affiliated colleges - Algoma, Nipissing and Hearst, be counted as eligible for funding purposes beginning in 1989-90 - the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

3.3 Concentration in Leisure Studies (BSocSc) University of Ottawa

On May 12, 1988 the University of Ottawa requested that Council consider for funding approval a new undergraduate quasi-professional Bachelor of Social Science Concentration within the Department of Leisure Studies. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU). Institutional responses indicated that there were no objections to the proposal.

1. Proposed Curriculum

The concentration offers a general training in the area of leisure studies. The proposed curriculum consists of 90 credits to be taken over three years. Courses are offered in English and in French.

2. Academic Quality of the Program

Council notes that Senate approval for the program was received August 5, 1986.

3. Financial Viability of the Program

The University of Ottawa indicated that no new courses or other additional resources such as staff, space, or other facilities are required and, therefore, approval from the Board of Governors was not needed.

4. Projected Enrolment

The University of Ottawa estimates that within five years, 35 to 40 students, including those from other Departments within the institution, will enrol in this program. The Concentration is expected to achieve the maximum steady-state enrolment level of 40 students in five years' time.

5. Co-operation with other Post-secondary Institutions

There are no official structures of co-operation between the three universities that give the BA in the area of leisure studies (Brock University, University of Ottawa and University of Waterloo). However, informal exchanges between professors and students at these institutions occur. In addition, there is a tacit agreement among the three institutions to recognize courses taken at one of the other institutions in cases where students wish to transfer credits.

6. Societal Need and Student Demand

Council notes that the University of Ottawa offers the only program in Leisure Studies in the province in both official languages. Enrolment over the past five years has been steady at 80 to 85 new students per year. Of these, approximately 45% are francophone. It is not anticipated that this ratio will change substantially. The program is open to students specializing in other disciplines. The University of Ottawa indicated that graduates find employment in government agencies such as the National Capital Commission, Parks Canada, Tourism Canada, and recreation agencies.

Council is satisfied that there is a societal need and a student demand for this program.

7. Uniqueness

This is the only program in Ontario in which courses in Leisure Studies are offered in both official languages.
The faculty is 90% bilingual.

8. Local and Regional Support for the Program

As noted above, graduates are hired by agencies working in the National Capital Region. Further, the program is supported by such associations as the Ontario Municipal Recreation Association and the Ontario Recreation Society.

9. Institutional Appropriateness

The nature of the program offerings reflects the commitment of the University of Ottawa to higher education in both official languages. The program is based on existing courses in Leisure Studies at the University of Ottawa.

10. Funding in a Time of Constraint

Council is satisfied that this program requires limited additional resources and believes that the program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-16
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SOCIAL SCIENCE, CONCENTRATION IN LEISURE STUDIES PROGRAM AT THE UNIVERSITY OF OTTAWA FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BSocSc concentration in Leisure Studies program at the University of Ottawa be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 1, with a weight of 1.0, as outlined in the Ministry's Operating Formula Manual.

3.4 Criminology (Honours BA) University of Windsor

On May 12, 1988 University of Windsor requested that Council consider for funding approval its new undergraduate quasi-professional Honours BA program in Criminology. In accordance with established procedures, Council circulated the program to the Council of Ontario Universities for comment. No objections were received and institutional comments generally supported the program.

1. Proposed Curriculum

The University of Windsor indicates that the program has an academic rather than applied emphasis. Required and optional courses are drawn from the disciplines of Sociology, Anthropology, Psychology, Social Work, Law and Political Science.

2. Academic Quality

This program was approved by the Senate of University of Windsor on May 21, 1987.

3. Financial Viability of the Program

The new program is to be based upon existing courses, therefore, Board of Governors' approval is not required. As well, resources have been reallocated to maintain the Certificate Program in Criminology. Council accepts the University of Windsor's statement that the program is financially viable.

4. Projected Enrolment

The University of Windsor anticipates an intake of 35 to 40 students per year of the program. The program is expected to achieve a steady-state enrolment level of 140 full-time students by 1993.

5. Co-operation with other Post-Secondary Institutions

No co-operation with other universities is planned.

6. Societal Need and Student Demand

The University of Windsor notes that existing courses in the Criminology and Criminal Justice program are frequently over enrolled. The Ontario Council of Chairs of Sociology and Anthropology note a high demand exists for such courses throughout Ontario. Further, a degree program is frequently requested by students enroled in the certificate program. Council is aware of an increasing demand for degree graduates in careers in law enforcement, corrections, probation and parole.

Council is satisfied that there is both a societal need and a student demand for this program.

7. Uniqueness

In its submission, the University of Windsor suggests that while the programs offered by University of Toronto (BA Criminology, Woodsworth College) and University of Ottawa (Bachelor Honours in Social Science with a general background in Criminology) are the most similar programs currently offered in Ontario, neither of these programs are offered at the honours level.[16] Windsor also indicates that "it is our understanding, that both of these programs operate at full capacity."[17]

Council is satisfied that, in this case, the degree of duplication of existing programs which occurs is justifiable, in light of the regional student demand for the program.

8. Local and Regional Support for the Program

The University of Windsor has been provided with evidence of local and regional support for the development of this program from former and potential students, and semi-professionals and professionals in the field of criminology.

9. Institutional Appropriateness

Council notes that the University of Windsor has offered a certificate in Criminology since 1980-81. This program is based on existing teaching and research resources, and courses.

Council is satisfied that this program is an appropriate development at the University of Windsor.

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[16] University of Windsor, Request for Funding: Honours BA Criminology, August 26, 1988, p. 1.

[17] Ibid.

10. Funding in a Time of Constraint

Given evidence of widespread support for the program and the ability of the University to mount this program without additional resource requirements, Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-17
ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF ARTS PROGRAM IN CRIMINOLOGY AT THE UNIVERSITY OF WINDSOR FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the Honours BA program in Criminology at the University of Windsor be counted as eligible BIUs for funding purposes beginning in 1989-90 - the upper years of the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

3.5 Labour Studies (Combined BA)
Brock University

On July 19, 1988, Brock University requested that Council consider for funding approval its new undergraduate quasi-professional Combined BA program in Labour Studies. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities for comment. Institutional respondents had no objection to the establishment of this program.

1. Proposed Curriculum

The proposed Labour Studies Program is a joint pass degree major program in the Division of Social Sciences, available to both full and part-time students. Courses will be selected from current offerings in Labour Studies and the departments of Economics, Politics, and Sociology.

2. Academic Quality

Council notes that this program received Senate approval on December 16, 1987.

3. Financial Viability

In its submission, Brock University notes that the proposal does not involve any additional expenses. The program involves the repackaging of existing offerings and, therefore, did not need Board of Governors' approval[18].

4. Projected Enrolment

Brock University anticipates an enrolment level of five full-time students in the first two years, increasing to ten students per year by the fifth year that the program has been offered.

5. Co-operation with other Post-secondary Institutions

No co-operation with other universities is planned.

6. Societal Need and Student Demand

Brock University indicates that this program will meet a general need for individuals trained in the area of labour studies as well as produce graduates who are particularly sensitive to the social, political and economic implications of recent changes in the structure of the labour process, the nature of the labour market and the relations between labour, management and the state due to the microelectronics revolution and the Canadianization of international labour organizations.[19]

Student demand is expected to originate with undergraduate students who wish to proceed to higher education in industrial or labour relations, or in professional activities such as law. Brock suggests that the program will also attract those students who expect to build upon their work experience in trade unions, human resource departments in local business enterprises, government departments of labour and private agencies which have an interest in labour-related issues.[20]

Council is satisfied that there is both a societal need and student demand for this program.

7. Uniqueness

The proposed program concentrates exclusively on the Social Sciences. This focus, while similar to the program at York, differs from the program at McMaster University. Council notes, that the program meets a regional need and demand and can be completed on a part-time basis.

Council is satisfied that the modest duplication of existing programs involved in this case is justifiable.

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[18] Brock University, Response to Ontario Council on University Affairs Request for Additional Information, September 13, 1988, p. 1.

[19] Brock University, Request for Funding: BA Labour Studies Program, July 19, 1988, p. 2.

[20] Ibid., p. 1.

8. Local and Regional Support for the Program

Brock indicates that letters of support have been received from both Niagara College and the St. Catharines and District Labour Council. Both groups have been involved in the planning of the program and in providing access to resources. Council is aware of the early participation of the trade union movement in the establishment of the University. As well, the region is heavily industrialized and a substantial percentage of this workforce is unionized. Council notes that a significant proportion of the original 'Founding Fund' for the University was donated by organized labour.

Council is satisfied that there is local and regional support for the program.

9. Institutional Appropriateness

Council notes that the program represents a re-grouping of existing course offerings to create a labour studies' focus. This appears to be an appropriate restructuring, which builds on institutional strengths.

10. Funding in a Time of Constraint

Given that the combined Labour Studies program requires no new resources and repackages existing courses, Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-18
ELIGIBILITY OF ENROLMENT IN THE COMBINED BACHELOR OF ARTS PROGRAM IN LABOUR STUDIES AT BROCK UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the Combined BA program in Labour Studies at Brock University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 1, with a weight of 1.0, as outlined in the Ministry's Operating Formula Manual.

3.6 Labour Studies (Honours BA, Double Major)
York University

On August 12, 1988, York University requested that Council consider for funding approval its new undergraduate quasi-professional Honours Double Major program in Labour Studies.

In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities for comment. Institutional respondents raised no objections to the program.

1. Proposed Curriculum

Students must enrol in an double major program leading to an Honours BA and combine six full-year equivalent courses in Labour Studies with six full courses from an Honours Major program in Anthropology, Economics, History, Political Science or Sociology.

The focus of the labour studies program is labour relations. The required double major reinforces the interdisciplinary nature of the program.

2. Academic Quality

Council notes that this program received Senate approval on April 28, 1988. The Senate indicated that the proposed program represented the first step toward the coordination of strengths which existed across the University in Labour Studies.

3. Financial Viability

Council notes that York intends to mount this program on the basis of existing resources.[21]

Council accepts that York University will ensure the financial viability of the program.

4. Projected Enrolment

Enrolment in related courses has been stable over the past four years. The projected enrolment in the new program over the next five years is expected to be relatively low (five to ten new students per year). By 1993, a steady-state enrolment of 15-20 students is expected.

5. Co-operation with other Post-Secondary Institutions

No co-operation with other universities is planned.

6. Societal Need and Student Demand

York University indicates that labour relations is recognized as a growing area for professional employment and advanced training in Canada and that there will be a growing and long-term societal need for labour relations specialists in the future.

York University has offered a number of courses in labour studies for at least a decade.[22] Enrolment in these courses has remained at consistently high levels; some have waiting lists. York University notes that students have sought more formal recognition of extensive course work in the field of labour studies than just a listing on a transcript.

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[21] York University, Request for Funding, Labour Studies, August 12, 1988, p. 5.

[22] Ibid., p. 9.

Students taking this program will be prepared for careers in industrial relations and human resource management as well as journalism, law, teaching, social work, business and public administration.

Council is satisfied that there is both a student demand and a societal need for this program.

7. Program Uniqueness

Council is satisfied that the program is distinct from the programs offered at Carleton University, the University of Toronto, Brock University and McMaster University.

8. Local and Regional Support for the Program

No local or regional support for the program was indicated in addition to evidence of local and regional student demand for the program.

9. Institutional Appropriateness

The division of Social Science has long promoted the kind of interdisciplinary or multidisciplinary teaching and research that is embodied in the proposed program. The Labour Studies program will supply a focus for teaching and research in the area, drawing together faculty resources that are already in place and building upon existing program strengths. Council notes that York has significant library holdings related to the field of Labour Studies.

Council is satisfied that this program is an appropriate development for York University.

10. Funding in a Time of Constraint

Since the proposed program utilizes existing courses, is meeting a student demand and a societal need and is financially viable, Council recommends this program for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-19
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ARTS HONOURS BA DOUBLE MAJOR LABOUR STUDIES PROGRAM AT YORK UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BA Honours, Double Major program in Labour Studies at York University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the upper years of the program to be in

Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

3.7 Management Economics Major in Industry and Finance (BComm) University of Guelph

On September 27, 1988, the University of Guelph submitted the new undergraduate, quasi-professional Management Economics Major in Industry and Finance program to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU). Institutional responses indicated that there were no objections to the proposal.

1. Proposed Curriculum

The Management Economics in Industry and Finance Major is a four year program designed to offer students an appreciation of business problems in the areas of industrial organization and finance. This program is based on a combination of economics courses and applied courses in business management, marketing and accounting. The program is administered by the Department of Economics.

With the exception of one new course in Effective Communication, the proposed program draws entirely on existing courses.

2. Academic Quality

The Senate of the University of Guelph approved the program on November 15, 1988.

3. Financial Viability

Since the new program will be based upon existing courses and resources, Board of Governor's approval was not required.

4. Projected Enrolment

The University of Guelph expects to enrol 18 students in year one of the program (1989-90), increasing to a steady state enrolment level of 87 students by 1995-96.[23]

5. Co-operation with other Post-secondary Institutions

No co-operation with other institutions was indicated.

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[23] University of Guelph, "Response to OCUA Request for Additional Information", December 13, 1988, Appendix A, p. 1.

6. Societal Need and Student Demand

The specialized focus of this program will meet a need, identified by both students and employers, for graduates with a commerce degree specializing in industry and finance. The University of Guelph expects that this program will attract students from the existing Management Economics BA Major as well as new students who would wish to specialize in the study of Industry and Finance. The University indicates that the impetus to develop the program came primarily from students currently enroled in the Management Economics BA Major program:

> It is our impression that our graduates have had no difficulty obtaining employment -- some have gone on to graduate studies. However, a frequent comment from some of them is that a more narrowly focused B.Comm. degree would have provided an even better match between their skills and what employers demand. We are attempting to respond to this perceived need through the proposed major, while also maintaining the less prescriptive, B.A. option.[24]

Evidence of support for the need to introduce this program was received from graduates of the Guelph Management Economics BA program and potential employers of program graduates.

The University of Guelph provided the Committee with a series of letters from academic advisors and student counsellors which demonstrated that student demand for the program has been strong, both from students within the current BA Management Economics program and high school students.[25]

The Council is satisfied that there is both a societal need and a student demand for the program.

7. Uniqueness

The program is not entirely unique. However, since it is based upon an existing strength in economics at the University of Guelph and the student demand for the program is strong, Council believes that the duplication of existing programs is justifiable.

8. Local and Regional Support for the Program

Support for the development of this program from potential employers and potential students is strong.

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[24] Ibid., pp. 1-2.

[25] Ibid, Appendix D, pp. i through vi.

9. Institutional Appropriateness

Since the late 1970's the University of Guelph has offered a set of Management Economics programs which resulted in a BA degree. Council believes that the development of a BComm degree designation for the proposed Management Economics program in Industry and Finance is appropriate, particularly given that only one new course need be developed for the program to be offered. Council notes that the program was proposed in conjunction with the recommendations of the Report of the Task Force on Agriculture, issued in July 1987.

10. Funding in a Time of Constraint

Given that the program has been developed in the context of a broader planning exercise conducted by the University of Guelph, requires no additional resources and is based on existing courses and program strengths, Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-20
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF COMMERCE MAJOR IN MANAGEMENT ECONOMICS - INDUSTRY AND FINANCE PROGRAM AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BComm Major in Management Economics -Industry and Finance program at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1989-90 -the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

Professional Programs

3.8 Aerospace Engineering (BEng)
Carleton University

Council has considered the advice of its Academic Advisory Committee regarding Carleton University's new Bachelor of Engineering program in Aerospace Engineering (see Appendix D).

Council notes that substantial evidence of societal need for this program has been provided by potential employers of program graduates. Student demand for the program is also demonstrably strong.

Given that Carleton University has existing strength in aeronautical engineering at the graduate level, and that the program is unique, Council believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-21
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ENGINEERING PROGRAM IN AEROSPACE ENGINEERING AT CARLETON UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BEng program in Aerospace Engineering at Carleton University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

3.9 Biology and Pharmacology (Honours BSc) McMaster University

Council has considered the advice of its Academic Advisory Committee regarding McMaster University's new Honours Bachelor of Science program in Biology and Pharmacology (see Appendix E).

Council recognizes that this program will contribute primarily to the preparation of students wishing to pursue graduate studies in the fields of pharmacology, toxicology and pharmaceutical.

Council notes that few additional resources are needed to offer the program and that the program is unique.

Council, therefore, concurs with the advice of the Academic Advisory Committee and believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-22
ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF SCIENCE PROGRAM IN BIOLOGY AND PHARMACOLOGY AT MCMASTER UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the Honours BSc program in Biology and Pharmacology at McMaster University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the upper years of the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

3.10 Environmental Engineering (BEng)
University of Windsor

Council has considered the advice of its Academic Advisory Committee regarding the University of Windsor's new Bachelor of Engineering program in Environmental Engineering (see Appendix F).

Council recognizes that the development of this program involved the phasing-out of a program in Chemical Engineering, in order to better meet societal need and student demand in the Province for a program specifically focused on environmental engineering.

Council notes that there is strong local and regional support for the co-op program and that it will be supported through existing strengths and the reallocation of existing resources.

Council, therefore, believes that this program should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-23
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ENGINEERING PROGRAM IN ENVIRONMENTAL ENGINEERING AT THE UNIVERSITY OF WINDSOR FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BEng program in Environmental Engineering at the University of Windsor be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

3.11 Health Administration (BHSc)
University of Toronto

Council has considered the advice of its Academic Advisory Committee regarding the University of Toronto's new Bachelor of Health Science program in Health Administration (see Appendix G).

Council recognizes that this program will meet a societal need and student demand for opportunities to obtain administrative and management skills related to the provision of health-care. Council notes that local and regional support for the program is strong and that demand is such that this program is not expected to affect enrolment in the Bachelor of Administrative Studies, Health Administration Option offered by York University.

Council notes that the University of Toronto has indicated specific financial arrangements must be in place before the University will ensure the financial viability of this program. However, Council accepts the commitment provided by the

University of Toronto, which guarantees that this program will not be established unless and until the necessary financing has been obtained.

Council, therefore, is prepared to recommend the approval of this program for funding eligibility, even in a time of economic constraint. This approval is not a commitment to extraordinary government support.

Accordingly, Council *recommends to the Minister:*

OCUA 89-24
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF HEALTH SCIENCE PROGRAM IN HEALTH ADMINISTRATION AT THE UNIVERSITY OF TORONTO FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BHSc program in Health Administration at the University of Toronto be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 2, with a weight of 1.5, as outlined in the Ministry's Operating Formula Manual.

3.12 Library and Information Studies (BA)
Lakehead University

Council has considered the advice of its Academic Advisory Committee regarding Lakehead University's new Bachelor of Arts program in Library and Information Studies (see Appendix H).

Council agrees with the advice of the Academic Advisory Committee on the issues of societal need, student demand, and institutional appropriateness. Council, in recognition of the need and demand for a program which trains library technicians in Northern Ontario who will be employed in Northern Ontario, believes strongly that such a program should be available. However, Council agrees with the Academic Advisory Committee's position that a program of this sort would be more appropriately situated in one of the community colleges in the region.

Council recommends that over the next five years the Ministry of Colleges and Universities and the Council of Regents in consultation with Lakehead University should arrange for a transfer of the library technician program to a community college in Northern Ontario.[26] Should there be no college willing to accept responsibility for offering a library technician program in the region, Council will reconsider the institutional appropriateness of a library technicians' diploma program at Lakehead University.

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[26] Council notes that this might involve negotiations similar to those which brought about the transfer of Diploma programs in Occupational and Physical Therapy from Mohawk College to McMaster University in 1985-86.

Accordingly, Council ***recommends to the Minister:***

OCUA 89-25
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ARTS PROGRAM IN LIBRARY AND INFORMATION STUDIES AT LAKEHEAD UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

THAT enrolment in the BA program in Library and Information Studies at Lakehead University not be counted as eligible BIUs for funding purposes.

Dr. H.V. Nelles
Interim Chairman

February 17, 1989

Appendix A

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Modifications to Bachelor of Science (Agriculture) Programs
University of Guelph
(Cursory Reviews)

Agricultural Business Major, BComm
Agronomy Major, BSc (Agr)
Animal Production Major, BSc (Agr)
Crop Protection Major, BSc (Agr)
Horticultural Science and Business Major, BSc (Agr)
Resources Management Major, BSc

On July 7, 1988, the University of Guelph submitted a group of new undergraduate professional and quasi-professional programs to Council for recommendations regarding funding eligibility. In accordance with established procedures, Council circulated the proposals to the Council of Ontario Universities (COU). The proposed programs and external comments thereon were referred to the Academic Advisory Committee for their specific advice.

The Academic Advisory Committee has reviewed the six proposed programs, and considers the new proposals to be modifications to existing BSc (Agr) programs. The Committee notes that the proposed modifications were made in accordance with the University's Report of the Task Force on Agriculture (1987) which reviewed the University of Guelph's undergraduate curriculum in Agriculture Science. The task force was established for two reasons: a) in response to a report published in 1986 by the Ontario Institute of Agrologists which specifically recommended that the University of Guelph

> ensure that educational programs in agriculture contain an appropriate mix of basic principles, social and political studies, agricultural economics, management and marketing, and technology to meet the requirements...for professional agricultural and rural life.[1]

and b) in response to a 42% decline in enrolment in agriculture programs at the

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[1] Letter from Dr. J.R. MacDonald, Vice-President, Academic University of Guelph, July 7, 1988, p. 1-2.

University between 1977 and 1988.[2] Guelph indicates that similar enrolment declines have been experienced by almost every college and faculty of Agriculture in Canada and the United States.

With input from the agrology profession and the agribusiness community, the University of Guelph has proposed this series of modifications to existing agriculture programs which are to "enable the University to better discharge its unique responsibilities for agricultural education in the Province of Ontario."[3]

The Academic Advisory Committee notes that the program modifications warranting review for the purposes of funding eligibility are as follows:

a) The BSc (Agr) program in Agricultural Business is to be redesignated a **BComm Major program in Agricultural Business.** Minor curriculum changes are involved.

b) The BSc (Agr) Major program in Crop Science (regular and co-op options) and the BSc (Agr) Major program in Soil Science are to be combined into a single **BSc (Agr) Major program in Agronomy**. The new program will be primarily based on existing courses.

c) The BSc (Agr) Major program in Animal and Poultry Science (regular and co-op options) is to be redesignated as a **BSc (Agr) Major program in Animal Production.** Minor curriculum changes are involved.

d) The BSc (Agr) Major program in Plant Protection is to be redesignated as a **BSc (Agr) Major Program in Crop Protection**. Minor curriculum changes are involved.

e) The BSc (Agr) Major program in Horticultural Science is to be redesignated as a **BSc (Agr) Major program in Horticultural Science and Business**. Minor curriculum changes are involved.

f) The BSc (Agr) Major program in Resources Management is to be redesignated as a **BSc Major program in Resources Management** (quasi-professional status). Minor curriculum changes are involved.

The above modifications were approved by the Senate of the University of Guelph on November 15, 1988. COU comments indicated that there were no objections to the proposed modifications.

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[2] Ibid., p. 1, (Enrolment dropped from 1,564 students in 1977 to approximately 900 students in 1988).

[3] Ibid., p. 2.

The Academic Advisory Committee is satisfied that the above modifications have been proposed in response to changing societal need and student demand for undergraduate agricultural education, and these modifications are relevant and responsive to the agricultural industry in Ontario.

Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the following programs be recommended as eligible for counting:*

Agricultural Business Major (BComm)
Agronomy Major (Bsc[Agr])
Animal Production Major (BSc[Agr])
Crop Protection Major (BSc[Agr])
Horticultural Science and Business Major (BSc[Agr])
Resources Management Major (BSc)

Academic Advisory Committee
December 9, 1988

Appendix B

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Concentration in Computer Integrated Manufacturing in Mechanical Engineering (BEng)
Carleton University

New Undergraduate Professional Program Considered for Funding Eligibility
(Cursory Review)

On August 15, 1988, Carleton University submitted the new undergraduate, professional program Concentration in Computer Itegrated Manufacturing in Mechanical Engineering, BEng, to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE).

Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Academic Advisory Committee notes that the program involves the study of computerized automation in the manufacturing process through all its stages, from design through materials handling to the finished product. The core of the program consists of eleven required half courses, including financial and management accounting, management, systems and manufacturing simulation, CAD/CAM and robotics courses. All of these courses are currently available within the mechanical engineering program as electives.

The Concentration in Computer Integrated Manufacturing in Mechanical Engineering program responds to a local and national demand for expertise in manufacturing engineering. Carleton indicates that issues related to automation and management dominate the concerns of contemporary industry. Carleton University notes also that mechanical engineering has a pivotal role to play in the development of automation processes at the management level which interface with engineering process automation since most mechanical engineering graduates practice in a design/manufacturing environment and in management during their career. Both COU and CODE responses indicated support for the proposed concentration.

The University expects to reach a steady-state enrolment level of 15 students in this concentration by 1991-92.[1]

The proposed new program received Senate approval on January 28, 1988.

Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the new Concentration in Computer Integrated Manufacturing in Mechanical Engineering at Carleton University be recommended as eligible for counting.*

Academic Advisory Committee
December 9, 1988

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1. Carleton University, Department of Mechanical and Aeronautical Engineering, Proposal for a Concentration in Computer Integrated Manufacturing in the B.Eng (Mech.) Program, August 15, 1987, p. 65.

Appendix C

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Concentration in Management in Civil Engineering (BEng) Carleton University

New Undergraduate Professional Program Considered for Funding Eligibility
(Cursory Review)

On August 15, 1988, Carleton University submitted its new undergraduate, professional program Concentration in Management, Civil Engineering, BEng, to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE).

Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Academic Advisory Committee notes that the Concentration in Management consists of nine half credit courses, two of which are already required courses within the ordinary Civil Engineering program. Carleton University indicates that:

> The concentration in management is designed to provide students [with] an understanding of the issues, concepts and techniques in management of technology and resources. It aims to impart to them enhanced problem-solving skills and should help widen the scope of their employment.[1]

The required courses cover the principles of finance and financial accounting, management theory and management accounting, organizational behaviour, industrial engineering and probability and statistics.[2]

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[1] Carleton University, Application for Funding Eligibility for the Concentration in Management, Civil Engineering Program, Appendix A, p. 1.

[2] Ibid.

The option was developed to meet a growing demand for engineers with scientific management skills. Graduates of the Civil Engineering, Concentration in Management program will have acquired additional skills in the management of financial, material and human resources, so essential to the successful delivery of a project.

Carleton University notes that several recent studies have concluded that engineering programs should include courses in management. In particular, Carleton cites a study conducted at Columbia University and supported by the Ford Foundation which recommended a liberalized engineering curriculum with up to 36 credits of business and economics courses.[3]

The University expects that the introduction of the Concentration will merely result in a shift among the current number of students within each of the civil engineering program options. The University projects a steady-state enrolment of 31 students by 1991-92 in the Management Concentration program.[4] No additional resources will be required to offer the Concentration in Management.

The proposed Concentration was approved by the Senate of Carleton University on January 28, 1988.

Both COU and CODE responses indicated support for the proposed concentration.

Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the new Concentration in Management in Civil Engineering at Carleton University be recommended as eligible for counting.*

Academic Advisory Committee
December 9, 1988

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[3] Carleton University, "Concentration in Management Addition to the Bachelor of Engineering (Civil)", August 15, 1988, p. 1.

[4] Carleton University, Application for Funding Eligibility for the Concentration in Management, Civil Engineering Program, "Bachelor of Engineering (Civil) Concentration in Management", August 15, 1988, p. 3.

Appendix D

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Aerospace Engineering (BEng)
Carleton University

New Undergraduate Professional Program Considered for Funding Eligibility

On July 21, 1988, Carleton University requested that Council consider for funding eligibility its new undergraduate professional program in Aerospace Engineering. In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities (COU) which, in turn, asked for and received advice concerning the proposal from the Council of Ontario Deans of Engineering (CODE). Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below:

1. Proposed Curriculum

The proposed Bachelor of Engineering program in Aerospace Engineering at Carleton University is a four-year program. For the first two and a half years, the program is the same as the existing Mechanical Engineering program. During the last year and one half of the program, students choose from a variety of elective courses drawn from one of two streams: Aerodynamics, Propulsion and Vehicle Performance, or Aerospace Structures, Systems and Vehicle Design. Students are required to participate in the team design of an aerospace vehicle.

2. Academic Quality

This program was approved by the Senate of Carleton University on January 28, 1988.

3. Financial Viability

The Board of Governor's approval was granted to this program on February 1, 1988. The program required the hiring of six new faculty and one technologist.

4. Projected Enrolment

In the Fall of 1988, fifty-eight students were admitted to the program. This enrolment level significantly exceeded the projected enrolment of 35 students for year one of the program.

5. Co-operation with other Post-Secondary Institutions

Students will have access to courses at the University of Ottawa, subject to approval of Carleton University. Extensive co-operation and integration of engineering and science programs exists between the University of Ottawa and Carleton University at the graduate level.

6. Societal Need and Student Demand

To establish the need for graduates of this program, Carleton University conducted an extensive survey of the Canadian aerospace manufacturing industry. The survey revealed that the industry employs about 45,000 people and had sales of $4.4 billion in 1986. Carleton estimates that there are approximately 2,700 aerospace engineers employed in Canada, primarily in Ontario and Quebec. Carleton indicates also that roughly 150 new aerospace engineers will be needed annually to account for retirements and planned corporate expansions. The unemployment rate in the field is about 1%, and as a result, aerospace companies in Canada are forced to recruit extensively abroad.[1]

Substantial evidence of societal need for the program was received from members of the Canadian aerospace industry such as the Canadian Marconi Company, which stated that:

> The Aerospace Industry in Canada is going through a major growth period with not only an increasing awareness and desire to participate on the space segment, but also in the upgrading of the civilian and military airspace equipment and practices. I believe it is the governmental desire to make Canada a centre of excellence for the supply of products and services to satisfy these needs both nationally and internationally. To achieve these goals in a meaningful and quality fashion demands that we develop the right Canadian expertise; your program will initiate that process.[2]

Similar support for the development of this program was received from I.M.P. Group Limited - Aerospace Division, which indicated that they were

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[1] In its submission, Carleton University notes that in 1985, 25 aerospace engineers entered Canada as landed immigrants and a further 56 aerospace engineers as temporary workers. Ibid., p. 2.

[2] Letter from Mr. Keith Fagan, Business Development Manager, CASP Business Development Group, Canadian Marconi Company, Kanata, Ontario to Professor R.J. Kind, Chairman, Aerospace Engineering Program, Carleton University, July 25, 1988, p. 1.

> very supportive of this endeavour, as we look to continued expansion of our Aerospace Engineering Division. We have hired a significant number of new graduates in recent years, primarily from Civil, Mechanical and Electrical disciplines. The availability of graduates from a program oriented towards Aerospace Engineering would significantly reduce the training period normally required, and we would anticipate recruiting a number of Aerospace Engineering graduates as your program develops.[3]

Other letters substantiating the societal need for the program were received from Aerospace Industries Association of Canada, Rolls-Royce (Canada) Limitée, Pratt and Whitney Canada, Boeing of Canada Ltd., and the Canadian National Research Council. The program received the support of COU and of CODE.

Student demand for this program has been extremely strong. Carleton University had expected the enrolment in the first year of the program to be approximately 35 students. However, the University underestimated the acceptance rate of the initial offers made and 58 students accepted offers of admission. Carleton notes that one of the incoming students was awarded the Chancellor's scholarship, the most prestigious in the University, attesting to the high calibre of the students attracted to the program.[4]

The Committee understands that Carleton is in the process of revising its steady-state enrolment projections upward, but that the program is not expected to enrol more than 58 to 60 new students per year.[5] Letters written in support of the program suggest that there will be a long-term demand for graduates of this program from engineering and scientific research firms, airlines, public sector research units, and military and civil engineering firms.

The Academic Advisory Committee is satisfied that there is sufficient evidence of a societal need and a student demand for the program.

7. Uniqueness

This program will be the first full four-year program in aerospace engineering in Canada. There is already a four-year BTech program in aerospace technology offered by Ryerson Polytechnical Institute. Also available at the undergraduate level is an aerospace option offered by the University of Toronto within Engineering Science which is similar. However, CODE indicates that "there is clearly room for an additional aerospace program in Canada".[6]

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[3] Letter from Mr. K.J. Blore, P.Eng, Chief, Airframe and Mechanical Systems Engineering, I.M.P. Group Limited - Aerospace Division, Halifax, Nova Scotia, to Professor R.J. Kind, Chairman, Department of Mechanical and Aeronautical Engineering, Carleton University, July 27, 1988.

[4] Carleton University, B. Eng. Program in Aerospace Engineering, July 7, 1988, p. 2.

[5] Letter from Dr. Malcolm Bibby, Carleton University, to the Ontario Council on University Affairs, December 6, 1988.

In Canada, graduate studies at the Master's and PhD level in aeronautical engineering are available only at Carleton University and at the University of Toronto.

The Committee is satisfied that the need and demand for this program is such that any duplication of the program offered at the University of Toronto is justifiable.

8. Local and Regional Support for the Program

The development of the Aerospace Engineering program at Carleton University has been guided by a seven-member advisory committee of senior engineers and engineering managers from private and public sector aerospace organizations. The program has been strongly supported by the aerospace industry and government research organizations.

9. Institutional Appropriateness

The Academic Advisory Committee notes that graduate degrees in aeronautical engineering have been offered by Carleton University at the graduate level for over 20 years and that the University has a core of faculty possessing the necessary expertise to offer the program.

The Department of Mechanical and Aeronautical Engineering has developed a close relationship with the aeronautical industry in Canada and the University clearly has existing strength in the fields of aeronautical and mechanical engineering.

The Committee believes that the development of a Bachelor of Engineering program in Aerospace Engineering at Carleton University is appropriate.

10. Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the new BEng program in Aerospace Engineering at Carleton University be recommended as eligible for counting.*

Academic Advisory Committee
December 9, 1988

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[6] Letter from Dr. David W. Bacon, Vice-Chair, Committee of Ontario Deans of Engineering, to Dr. E. J. Monahan, Executive Director, Council of Ontario Universities, October 24, 1988, p. 1.

Appendix E

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Biology and Pharmacology (Honours BSc) McMaster University

New Undergraduate Professional Program considered for Funding Eligibility

On August 18, 1988, McMaster University requested that Council consider for funding eligibility its new undergraduate professional honours program in Biology and Pharmacology. In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities (COU). The program was also circulated to the Ontario Ministry of Health for review and comment. The proposed program and external comments were referred by the Ontario Council on University Affairs to the Academic Advisory Committee for their specific advice thereon.

The Committee's findings with respect to the program are summarized below:

1. Proposed Curriculum

The proposed Honours BSc Biology and Pharmacology program is a five year co-op program. The first three years of the program are the same as the existing honours biology program. The remainder of the program includes three terms spent in off-campus work related to pharmacology, toxicology or pharmaceutical. A senior thesis is required of each student. The majority of pharmacology courses will be taught using the problem-based, self-directed learning approach used in the nursing and medicine programs at McMaster University.

2. Academic Quality

The program was approved by the Senate of McMaster University on June 8, 1988.

3. Financial Viability

The program was approved by the Board of Governors of McMaster University on June 15, 1988. The University indicates that "existing resources will be used to plan and coordinate the new courses in Pharmacology."[1]

4. Projected Enrolment

McMaster University indicates that the program will not result in any net increase in the number of students within the Faculty of Science. However, the program will stream twenty-five students per year away from the Honours Biology program. The program will enrol fifty students at the steady-state.

5. Co-operation with other Post-Secondary Institutions

No co-operation with other institutions is planned.

6. Societal Need and Student Demand

Graduates of the program will meet a demand for employees with a pharmacology background. Graduates would be employed in government laboratories, Canadian and American pharmaceutical companies and in firms conducting agricultural and veterinary research. However, the primary objective of the program is to produce graduates "who will be superbly prepared for graduate work in Pharmacological, Toxicological and related Biological research."[2]

The Academic Advisory Committee has received confirmation that McMaster University has been promised co-op placements for the program with corporations such as Knoll Pharmaceutical Canada, Merck Frosst Canada Inc., Glaxo Canada, and Abbott Laboratories.

The demand for graduates of the program is expected to increase as society places an ever-greater emphasis upon safety in the workplace and the preservation of the environment. In addition, proposed developments in the pharmaceutical industry in Canada resulting from recent federal legislation which extends the length of patent protection on drugs in Canada, may result in Canadian pharmaceutical companies committing extensive resources to pharmaceutical research. Should the expansion of pharmaceutical research occur, this program will already be producing graduates who will have the appropriate training to meet the industry's needs for pharmaceutical, occupational health and safety, and toxicological research and development.

The Ministry of Health indicated that it had no opinion on the program. The Council of Ontario Universities did not raise any objections to the program.

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[1] McMaster University, Request for Funding - BSc Honours Biology and Pharmacology, August 18, 1988, p. 2.

[2] Letter from Dr. D. N. Jensen, Associate Dean of Science (Studies), McMaster University, to Dr. Viv Nelles, Interim Chairman, Ontario Council on University Affairs, December 7, 1988, p. 1.

McMaster University anticipates no difficulties in attracting the desired enrolment level of twenty-five students per year to the program.

The Academic Advisory Committee is satisfied that there is a societal need and a student demand for this program.

7. Uniqueness

This is the only combined program in Biology and Pharmacology in Ontario. The Committee is satisfied that the program is unique.

8. Local and Regional Support for the Program

The program was generally supported by local pharmaceutical companies, some of which have indicated that they would be willing to provide co-op positions for students in the program.

9. Institutional Appropriateness

McMaster University has a strong teaching and research base in the Health Science and Biology fields, as well as expertise in the use of the problem-based, self-directed learning process on which the pharmacology courses are based.

The Academic Advisory Committee is satisfied that it is appropriate that this program be offered by McMaster University.

10. Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the Honours Bachelor of Science program in Biology and Pharmacology at McMaster University be recommended as eligible for counting.*

Academic Advisory Committee
January 13, 1988

Appendix F

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Environmental Engineering (BEng)
University of Windsor

New Undergraduate Professional Program considered for Funding Eligibility

On August 26, 1988, the University of Windsor submitted the new undergraduate, professional Bachelor of Engineering program in Environmental Engineering to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE). Council referred the program, and COU's comments thereon, to its Academic Advisory Committee and asked for specific advice.

The Committee's findings with respect to the program are summarized below:

1. Proposed Curriculum

The proposed Bachelor of Engineering program in Environmental Engineering at the University of Windsor is a four-year co-op program, the objective of which is to

> produce graduates with a sound general education in the fundamentals of engineering and with unique qualifications which will permit them to focus on the engineering aspects involving the transport, transformation and removal of contaminants in air, water and soil as well as the broader aspects of environmental planning and impact assessment.[1]

The development of the program was initiated by a critical examination, undertaken in 1986, of the program offerings and administrative structure of the University of Windsor's Faculty of Engineering. The master-plan which was created as a result of this review recommended the phasing out of the existing undergraduate program in Chemical Engineering and the creation of the proposed Environmental Engineering program which would be administered in a combined

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[1] University of Windsor, Proposal to the Ontario Council on University Affairs for a new Baccalaureate Program in Environmental Engineering, September 9, 1988, p. 3 - 4.

Civil and Environmental Engineering department.

2. Academic Quality

The program was approved by the Senate of the University of Windsor on February 24, 1988.

3. Financial Viability

This program is replacing the Chemical engineering program at the University of Windsor. Therefore, the majority of expertise, laboratory space and equipment necessary to offer the new program already exists. Windsor indicates that no additional space is needed because the laboratory and research space previously occupied by the Chemical Engineering program has been transferred to the Department of Civil and Environmental Engineering. Windsor also notes that plans are underway to convert all laboratory space previously assigned to Chemical Engineering into Environmental Engineering analytical, design and research laboratories.[2] Board of Governors' approval of the program was not required.

4. Projected Enrolment

Students wishing to enrol in the Environmental Engineering program do so after completing a common first year of engineering. The University admitted 8 students to the program in 1988-89. Enrolment in the program is projected to increase to twenty students by 1991-92. it is estimated that a total of fifty-four students will be enroled in the program by 1993-94.

5. Co-operation with other Post-secondary Institutions

No formal co-operation with other institutions has been developed.

6. Societal Need and Student Demand

The University of Windsor indicated that in recent years many of its civil and chemical engineering program graduates have found employment in the area of environmental engineering with government agencies, consulting firms, industry, municipalities and universities. To firmly establish the societal need for a program in environmental engineering, the University contacted approximately 150 industries, engineering consulting firms and municipalities. Survey results indicated that there was a strong local and regional need for graduates of the program and that many firms and agencies were interested in providing positions for co-op students and in employing program graduates.

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[2] Ibid., p. 5.

Evidence of the need for this program was provided by a number of organizations. The firm of N. K. Becker and Associates Ltd. - Consulting Engineers indicated:

> The creation of this programme addresses the need within Ontario and Canada for engineering specialists who can focus their skills on environmental engineering matters. There is a real need for environmental engineers both within private industry and government agencies.[3]

Comments from other firms indicated that the demand for graduates of the program may be significant and longterm:

> Local industries are under tremendous pressure as a result of increased awareness of environmental regulations. A great deal of research and development will be required to meet tough new Government environmental standards. An example is the proposed white paper on reducing air emissions substantially over the next ten years.
>
> A Co-op Programme would provide an opportunity for local students and industry to develop a leadership role in environmental studies. Industry will be able to benefit from a Co-op Programme.[4]

Similar letters documenting a societal need for the program were received from Spaarg Engineering Limited - Noise and Vibration Analysis, Chairman of the Air Quality Committee of the Lambton Industrial Society, the City of Windsor, General Motors of Canada Limited, Hiram Walker and Sons Limited, Chrysler Canada Limited and Proctor and Redfern Limited - Consulting Engineers and Planners.

Comments received from CODE and COU also indicated that there was a societal need for such a program and that it was an appropriate program to be offered at the University of Windsor.

Student demand for the program is expected to be strong. A survey of student preferences conducted by the University of Windsor revealed "substantial interest" in the Environmental Engineering program. Windsor notes that

> All students who had indicated a preference for Chemical Engineering when they enroled in the general first-year engineering program in 1987,

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[3] Letter from Dr. N.K. Becker, N.K. Becker and Associates Ltd. - Consulting Engineers, to Dr. Cameron MacInnis, Dean of Engineering, University of Windsor, January 13, 1988, p. 1.

[4] Letter from Mr. Maxwell S. Zalev, Zalev Brothers Limited, Windsor, Ontario, to Dr. C. MacInnis, Dean, Faculty of Engineering, University of Windsor, January 18, 1988.

as well as a few students who had contemplated other programs, are enthusiastic about making the transition to Environmental Engineering.[5]

The Academic Advisory Committee is satisfied that there is both a societal need and student demand for the program.

7. Uniqueness

The University of Windsor indicates that this would be the first undergraduate Environmental Engineering program in Canada. CODE notes that various elements of the program can be found within Civil and Chemical Engineering programs elsewhere; however "the program would be unique in terms of its combination of courses."[6]

The Academic Advisory Committee is satisfied that the program meets the uniqueness criterion.

8. Local and Regional Support for the Program

In its submission, the University of Windsor notes that the Windsor area is well known for its air, water and industrial noise pollution problems. Windsor indicates that in the past, faculty members associated with the Environmental Engineering program have taken an active role, both in research and consulting capacities, in advising industry and government officials with respect to air pollution abatement programs.[7] This role will be enhanced with the introduction of this program. Co-operation with the Great Lakes Institute of the University of Windsor is also expected to increase as a result of the program.

The Committee was provided with extensive evidence of support for the program from local and regional employers.

The Committee is satisfied that local and regional support for the program is strong.

9. Institutional Appropriateness

The development of the Environmental Engineering program at the University of Windsor utilizes existing strengths in programs in Civil Engineering (water resources, water and waste water systems), Chemical Engineering (air quality, heat transfer and fluid dynamics, occupational hygiene, chemical processes and calculations), Mechanical Engineering (noise and vibration), and Geological

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[5] University of Windsor, Supplementary Information Package, September 9, 1988, Appendix B, p. 1.

[6] Letter from Dr. David W. Bacon, Vice-chair, committee of Ontario Deans of Engineering, to Dr. E. J. Monahan, Executive Director, Council of Ontario Universities, October 24, 1988, p. 2.

[7] University of Windsor, Supplementary Information Package, September 9, 1988, Appendix B, p. 2.

Engineering (groundwater). The program will also benefit from graduate program strength in the Chemical Engineering programs' Air Quality group and the Civil Engineering programs' Water-Resources group.

Given that the Environmental Engineering program has been developed on the foundations of a Chemical Engineering program which has been closed, and the University of Windsor has existing and related strengths in areas related to environmental engineering, the Academic Advisory Committee is satisfied that this program is an appropriate development at the University of Windsor.

10. Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the new BEng program in Environmental Engineering at the University of Windsor be recommended as eligible for counting.*

Academic Advisory Committee
December 9, 1988

Appendix G

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Health Administration (BHSc)
University of Toronto

New Undergraduate Professional Program Considered for Funding Eligibility

On December 4, 1987, the University of Toronto requested that Council consider for funding eligibility its new undergraduate professional program in Health Administration. In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities (COU), which in turn received advice from the Ontario Council on University Health Sciences. The proposed program was also circulated to the Ontario Ministry of Health for review and comment. The program and external comments were referred by the Ontario Council on University Affairs to the Academic Advisory Committee for their specific advice thereon.

The Committee's findings with respect to the program are summarized below:

1. Proposed Curriculum

The proposed Health Administration program is a four-year program administered by the Department of Health Administration, Faculty of Medicine, in cooperation with Woodsworth College. The University will consider, for advanced standing, students who have completed university or community college courses as part of a program leading to professional qualifications in one of the allied health professions. During the first five years of the program, admission will be restricted to professionals already employed in health services delivery.

The program will consist of 20 full courses and a period of mandatory supervised fieldwork. The majority of the courses involved already exist within the Faculty of Arts and Science; however, eight new half courses and two new full courses in health administration have been developed.

The curriculum satisfies the requirements of the North American accrediting body, the Association of University Programs in Health Administration (AUPHA).[1]

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[1] Letter from Dr. D. W. Lang, Assistant Vice-president (Planning) and University Registrar, University of Toronto, to Dr. P.W. Fox, Chairman, Ontario Council on University Affairs, December 4, 1987, p. 1.

2. Academic Quality

The program was approved by the Governing Council of the University of Toronto on December 3, 1987.

3. Financial Viability

The University of Toronto indicates that a net addition of 3.5 FTE academic staff members would be phased in over the first three years of the program. It was also noted that a full-time equivalent secretary would be required in year two of the program.

The program was approved by the Planning and Resources Committee of the University of Toronto:

> on the condition that the projected levels of expense (expressed in 1986-87 dollars) will not be exceeded, and on the conditions that:
>
> i) accessibility funds are available for the additional enrolment attributable to the program, and that;
>
> ii) the Faculty and the College present a plan for assumption of support of the program in Health Administration upon the termination of accessibility grants when that occurs.[2]

On the basis of assurances from the University of Toronto, the Academic Advisory Committee is satisfied that the program will not be mounted unless the University has in place funding arrangements which will ensure the program's longterm financial viability.[3]

4. Projected Enrolment

The University of Toronto intends to enrol 10 full-time equivalent (FTE) students in the first year that the program is offered. After three years of operation the University expects that the program will accept thirty FTE students into year one of the program.

In the sixth year of the program, the University projects that the cumulative steady-state enrolment would be eighty-eight FTE students.

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[2] University of Toronto, Memorandum, September 14, 1987, re Faculty of Medicine and Woodsworth College: Proposed B.H.Sc. in Health Administration, November 1986, p. 9.

[3] Letter, op. cit., December 4, 1987, p. 2.

5. Co-operation with other Post-Secondary Institutions

No co-operation with other institutions is planned.

6. Societal Need and Student Demand

The University of Toronto notes that the health-care industry is one of the fastest growing and most labour intensive of all Canadian industries. Although graduate programs in health administration are meeting the demand for the training of senior managers and administrators of health care organizations in Canada, the University indicates that many first-line and middle-level managers are seeking systematic educational preparation in order to perform their management responsibilities more adequately and to qualify for promotion within their organizations.[4] The University notes that there is no undergraduate program in Canada which provides a training opportunity for first-line managers in the health field which is recognized by and affiliated with the Association of University Programs in Health Administration.

Following a needs study conducted by the University, which surveyed 250 health care institutions, public agencies, professional associations, and individual practitioners, the University concluded that there exists a substantial unmet need for an undergraduate program for the training of health administrators in Canada. The survey results identified the need for a program which covers management techniques and offers an understanding of the health services system. These results also suggested that most applicants to the program would be already employed in the field and would pursue the program on a part-time basis.

Prospective students for which this program would be appropriate are individuals currently employed as head nurse, manager of human resources, health records administrator, administrative assistant, and radiology department supervisor.

Assurance of the societal need and student demand for the program was received from the Canadian College of Health Service Executives,[5] the Canadian Hospital Association,[6] the Canadian College of Health Record Administrators,[7] and the Ontario Council of University Health Sciences. COU and the Ministry of Health also indicated their support for the program.

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[4] University of Toronto, Department of Health Administration, Proposal for a Programme Leading to a Bachelor of Health Administration Degree., July 1986, p. i.

[5] Letter from M. Charles A. Shields, Jr., Vice-President, Professional Development, Canadian College of Health Service Executives to Dr. P. W. Fox, Chairman, Ontario Council on University Affairs, May 17, 1988.

[6] Letter from Jean-Claude Martin, President, Canadian Hospital Association, to Dr. P. W. Fox, Chairman, Ontario Council on University Affairs, August 4, 1988.

[7] Letter from Patricia A. Hewes, Executive Director, Canadian College of Health Record Administrators, to Dr. P.W. Fox, Chairman, Ontario Council on University Affairs, March 29, 1988.

The Academic Advisory Committee is satisfied that there is a societal need and student demand for the program.

7. Uniqueness

Although the proposed program is similar in many respects to the existing Bachelor of Administrative Studies, Health Administration Option, offered by York University through Atkinson College, the Canadian Hospital Association suggests that there is a potential market for the proposed program of 25,000 individuals in the Metropolitan Toronto region. Given the evidence of strong need and demand for such a program the Committee believes that any duplication involved is justifiable.

8. Local and Regional Support for the Program

The Committee has been provided with the results of the need/demand survey conducted by the University of Toronto and letters from provincially and nationally based health administration organizations, all which reflect extensive local and regional support for the proposed program.

9. Institutional Appropriateness

The University of Toronto has been training health care administrators in management since 1948. A Master of Health Science degree in Health Administration has been offered since 1979. The University has extensive existing strengths in the health-care field.

The Committee is satisfied that the BHSc Health Administration program is an appropriate development at the University of Toronto.

10. Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the new BHSc program in Health Administration at the University of Toronto be recommended as eligible for counting.*

Academic Advisory Committee
January 13, 1988

Appendix H

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Library and Information Studies (BA)
Lakehead University

New Undergraduate Professional Program Considered for Funding Eligibility

On January 20, 1988, Lakehead University requested that Council consider for funding approval a new undergraduate professional program in Library and Information Studies. In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities (COU). Council referred the program, and COU's comments, to its Academic Advisory committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below:

1. Proposed Curriculum

The three-year Bachelor of Arts program in Library and Information Studies is the result of an expansion of a two-year Library Technology Diploma, offered by Lakehead University since 1966, and is housed within a newly created Department of Library and Information Studies. Lakehead notes that the diploma program was modified in order to conform to the Minister's requirements for the funding of certificate and diploma programs in Ontario universities.[1]

Lakehead University indicates that "Upon completion of this program, students will have met [the] Canadian Library Association's requirements for Library Technician status",[2] that graduates will be qualified library technicians, and that "they will assume the same responsibilities of any graduate library technician".[3]

The Federal Government publication Job Futures, 1988-89 edition, indicates that library technicians assist professional librarians in operating a library. This involves establishing, organizing, maintaining and making information collections accessible to users.[4]

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[1] See Ontario Council on University Affairs, Twelfth Annual Report, Advisory Memorandum 85-I, "Funding for University Undergraduate Certificate and Diploma Programs and Ryerson Certificate Programs".

[2] Lakehead University, Three-Year Bachelor of Arts Program in Library and Information Studies, January 20, 1988, p. 1.2.

[3] Letter from Mr. G.R. Weller, Vice-President (Academic), Lakehead University, December 13, 1988, Attachment p. 2.

In addition to required courses, students are required to complete a five-week "practice work" placement.

2. Academic Quality

The proposed program was approved by the Senate of Lakehead University on December 10, 1987.

3. Financial Viability

By letter of January 19, 1988, from the Chairman of the Board of Governors', Mr. R.P. Welter, the Ontario Council on University Affairs was assured that the program is financially viable.[5]

4. Projected Enrolment

The University projects a first-year enrolment of 25 full-time students per year for the next five years. Full-time enrolment would be complemented by an additional 25 to 35 part-time students enroled in each year of the program over the next five years.

5. Co-operation with other Post-Secondary Institutions

Laurentian University has indicated that it would provide facilities so that the proposed program could also be offered by Lakehead University on the Laurentian campus.

6. Societal Need and Student Demand

The Academic Advisory Committee received conflicting evidenced with respect to the societal need for this program.

In support of the program, Lakehead argues that there is a societal need for graduates of the proposed Library and Information Studies BA in hospital libraries, boards of education, government libraries and public libraries in a variety of locations in Northern Ontario.

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[4] Job Futures, 1988-89 Edition, Volume Two, No. 2353, p. 107.

[5] Letter from Mr. Robert P. Welter, Chairman, Board of Governors, Lakehead University, to Dr. P. Fox, Chairman, Ontario Council on University Affairs, January 19, 1988.

The Ontario Public Library Association (OPLA) endorsed the need for the proposed Bachelor of Arts program in Library and Information Studies. OPLA states:

> There is a definite need for more trained personnel in small public libraries - especially in Northern Ontario. Most graduates of Southern Ontario Library Schools will not locate in Northern Ontario. This has meant that many libraries are forced to hire unqualified, though committed, individuals. These current employees often can not afford either the time or the money to travel to Southern Ontario for training. Lakehead University is the only facility to offer library training in Northern Ontario.[6]

On the other hand, comments received from the Council of Ontario Universities indicated that some institutions did not support the specific proposal. For instance it was suggested that

> since employers are likely to hire graduates of the proposed Lakehead programme on the same basis as graduates of two-year community college Library Technician programmes, of which Ontario has several, there is some concern that students taking the Lakehead programme will not realize they are taking a three-year programme with no attendant advantages over a two-year one.[7]

Comments from the Ontario College and University Library Association (OCULA) declared that "There was general agreement that the graduates with a B.A. in Library and Information Studies would not be employed any differently than library technicians."[8] Although community college representatives of OCULA indicated that "there is a definite need in the workplace for workers with a B.A. and library training and graduates should have no difficulty finding employment", OCULA noted that "The university employers did not believe that there is a need for this program."[9]

Concerns with regard to the societal need for the program arose in four areas. OCULA university representatives suggested that:

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[6] Letter from Ms. D.R. Brown, Representative, Ontario Public Library Association Council, Ontario Public Library Association, August 2, 1988, p. 1.

[7] COU, Comments on the Lakehead University Library and Information Studies (BA) Programme, November 17, 1988, p. 2.

[8] Letter from Ms Annetta Protain, President, OCULA, July 26, 1988, p. 1.

[9] Ibid., Pp. 1-2.

a) the program would exacerbate the existing problem of institutions attempting to provide library service without a professional librarian;

b) a new level of library staff should not be introduced without considerable input and study from the library profession;

c) there is already a proliferation of library qualifications (BLS, MLS, LT Diploma, B.A. with library experience, Teacher Librarian courses, Ryerson's Information Studies Certificate, Sheridan's Information Technology Certificate, and EXCEL) and this program would add to the confusion in the minds of many employers; and

d) that non-professional library staff will not experience an employment advantage with this degree.[10]

Specifically on this final point, OCULA university employers stated:

> A three year Bachelor of Arts program in Library and Information Science offers no employment advantage to the student or the employer. Within an academic library, graduates of the program will not be considered as either librarians or other professionals. By definition they will be members of the support staff. In hiring support staff, libraries may ask for a university degree or a language facility but not, I suggest, a pass B.A. in Library Science. This degree would offer a diluted version of a recognized bachelor's program and the library science content would not in itself be adequate to attract employment offers beyond those normally offered to library technicians. In my judgement, students are being seriously misled if they believe that such a program offers any employment advantage.[11]

Comments received from the Ontario Hospital Libraries Association (OHLA) also indicated that the majority of its members "expressed strong reservations which, in consensus, out-weighed any potential benefits of the new degree program."[12] OHLA elaborated on their concerns as follows:

> Granting Bachelor of Arts status to what appears to be little more than a library technician's diploma course not only detracts from the value of the

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[10] Ibid., p. 2.

[11] Ibid., p. 2.

[12] Letter from Ms. Christie Macmillan, President, Ontario Hospital Libraries Association, August 4, 1988, p. 1.

> degree itself but also does little to provide the all-round background in humanities or sciences that is essential to subsequent professional librarianship. The proposed degree program also does not contribute to a subject specialty knowledge. Conversely, the technical training component appears necessarily compromised and no more sophisticated than the programs offered at the community college level.[13]
>
> To state that there is a societal need for this program would be a mistake. At the technical level within the hospital library system, the OHLA Executive could find no advantage to the degree program over the diploma program. In fact, the diploma technicians are already under-utilized, except perhaps in large health sciences libraries. To spend more time obtaining credentials that may not guarantee any significant increase in salary or responsibilities would be questionable.

The Executive of the OHLA concluded by indicating that they

> cannot support the recommendation that Lakehead University introduce a Bachelor of Arts in Library and Information Studies program.[14]

In spite of the fact that there is a societal need for a library technician program to train library technicians in Northern Ontario, after reviewing all of the above information, the Committee concluded that the arguments against this program out-weighed those in favour of it.

With respect to student demand, Lakehead University indicates that demand for the program would come from high school graduates, BA graduates and individuals currently working in the library and information technology fields for the purposes of upgrading their qualifications.

However, the Committee notes that enrolment in the Library Technology diploma program at Lakehead over the past 10 years shows a declining level of student demand for the program in the full-time and part-time components. Enrolment has fallen from 30 FT and 21 PT students in 1976 to 18 FT and 13 PT students in 1986.[15] Lakehead notes that in 1987-88 there was an increase in enrolment to 25 full-time students and 15 part-time students.[16]

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13. Ibid., p. 2.

14. Ibid., p. 2.

15. Lakehead University, Memorandum to Mrs. M. MacLean, Acting Director, Library Technology, from Ms. Donna Stecky, Records Officer, Registrar, January 18, 1988.

16. Lakehead University, School of Library Technology Enrolment Figures, September 30, 1987.

The Committee is prepared to submit that there is a reasonable possibility that Lakehead University could achieve its enrolment projections of 25 FT students per year in the proposed program.

The Committee concludes that there is both a societal need and student demand for a library technician program in the region, and that in the absence of a community college program, this is the only one available. But, there does not appear to be a societal need for a university program of this kind.

7. Uniqueness

Six Ontario colleges of applied arts and technology offer library technician programs. This program is unique at the university level in Ontario[17].

Full-time Library Technician programs are offered at Algonquin, Fanshawe, Niagara, Seneca and Sheridan colleges. A part-time program is offered at Mohawk college.[18] Ministry data suggests that there is "only moderate to low demand for the program" and that the college system could easily accommodate additional full-time and part-time students.[19]

The Academic Advisory Committee believes that the program does not satisfy the criteria of uniqueness in light of the programs available within the Ontario system of post-secondary education.

8. Local and Regional Support for the Program

The Academic Advisory Committee was provided with considerable evidence of local and regional support for the program.

The Committee is satisfied that there is strong local and regional support for a program training library technicians in Northern Ontario.

9. Institutional Appropriateness

In Advisory Memorandum 85-I, Funding for University Undergraduate Certificate and Diploma Programs and Ryerson Certificate Programs, the Ontario Council on University Affairs reviewed the policy of funding certificate and diploma programs offered outside the colleges of applied arts and technology (CAATs). The CAATs have a specific mandate to provide programs at this level.

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[17] Lakehead University indicates that there are currently twenty-two programs in Canada for Library Technicians: two in British Columbia, two in Alberta, one each in Saskatchewan and Manitoba, seven in Ontario, and nine in Quebec. With the exception of two programs (Lakehead University and Concordia University) all are community college based.

[18] Ministry of Colleges and Universities, Horizons, 1989-90, p. 20.

[19] Letter from Mr. W.A. Summers, Manager, Program Services Section, College Affairs Branch, Ministry of Colleges and Universities, to Dr. P.W. Fox, Chairman, Ontario Council on University Affairs, June 3, 1988.

In this Memorandum, OCUA indicates that it shares with the Minister a "concern that the universities not impinge on the mandate of the CAATs" to provide certificate programs in the particular "core" range of offerings outlined by the province in 1966..."[20]. This "core" range of offerings includes "semi-professional non-engineering type programs (e.g. in the para-medical field)", and "high level programs in office and distributive occupations, specifically of junior and middle management level, and including courses for small business."[21]

The Academic Advisory Committee, in evaluating the appropriateness of this program, consulted the College Affairs Branch of the Ministry of Colleges and Universities to ascertain whether or not the Ministry used specific guidelines to delineate the programmatic scope of the colleges from that of the universities. The Ministry indicated that while it

> does not have explicit policy guidelines regarding the boundaries between colleges and universities, colleges have largely focused on training paraprofessionals while universities have generally trained professionals. While colleges offer programs with a significant practical component, universities have, for the most part, emphasized the theoretical elements.[22]

Comments received from Lakehead University with respect to the Library and Information Studies program clearly state:

> The program is not "likened" to a Library Technician program, it is one - it follows the CLA Guidelines for the Education and Training of Library Technicians.[23]

Given Council's position with respect to the prevention of overlap between CAAT and university offerings, specifically stated in Advisory Memorandum 85-I:

> ...Council believes that every effort should be made to ensure that their distinctive roles within the post-secondary setting are respected, while at the same time allowing for some appropriate cooperation where

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[20] Ontario Council on University Affairs, Advisory Memorandum 85-I, Funding for University Undergraduate Certificate and Diploma Programs and Ryerson Certificate Programs, p. 17.

[21] Ibid.

[22] Letter from Mr. W.A. Summers, Manager Program Services Section, College Affairs Branch, Ministry of Colleges and Universities, to Dr. P.W. Fox, Chairman, Ontario Council on University Affairs, June 3, 1988, pp. 2-3.

[23] Letter from Mr. G.R. Weller, Vice-President (Academic), Lakehead University, to Dr. H.V. Nelles, Interim Chairman, Ontario Council on University Affairs, December 13, 1988, Attachment, p. 1.

> institutional circumstances clearly warrant. Although some program overlap is inevitable, Council believes that the essential difference between offerings at the CAATs and the universities lies in both the rigour and academic level of their respective programs.[24]

and given that Lakehead University explicitly states:

> Lakehead's program does not create a new personnel level in Ontario libraries - graduates are qualified library technicians. As graduates, they will assume the same responsibilities of any graduate library technician.[25]

the Academic Advisory Committee believes that it is not appropriate for this program to be offered by Lakehead University because it is primarily a technical program. It produces graduates who will be employed as technicians despite the fact that this role is clearly the function of the community colleges in Ontario. It is the opinion of the Committee that this program should be offered within an Ontario community college of applied arts and technology, which would meet the identified need for a library technician program in Northern Ontario.

Therefore, the Academic Advisory Committee concludes that it is not appropriate for Lakehead University to offer this program.

10. Funding

The Committee, therefore, recommends to the Ontario Council on University Affairs that

> *enrolment in the new BA program in Library and Information Studies at Lakehead University be recommended to Council as being ineligible for counting.*

Academic Advisory Committee
January 13, 1989

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[24] Ontario Council on University Affairs, Twelfth Annual Report, Advisory Memorandum 85-I, "Funding for University Undergraduate Certificate and Diploma Programs and Ryerson Certificate Programs, pp. 17-18.

[25] Letter from Mr. G.R. Weller, Vice-President (Academic), Lakehead University, to Dr. H.V. Nelles, Interim Chairman, Ontario Council on University Affairs, December 13, Attachment, p. 2.

89-II MODIFICATION OF THE OPERATING GRANTS FORMULA

1.0 Introductory Summary

Council has been asked to advise on a new approach to allocating university operating grants funding for 1990-91 and beyond which takes into account recent enrolment growth and which will promote a coordinated and planned approach to future enrolment.

In this memorandum Council recommends that:

- the corridor system be modified to accommodate permanent enrolment increases

- the flow-through of students from existing levels of intake should be funded at Average Revenue

- the $84 million Accessibility Envelope be phased-out over three years and the funds be combined with the flow-through commitment to fund upward corridor shifts

- $91.1 million in additional on-going operating grants be provided over 6 years to cover the costs associated with the estimated increase of 19,500 Basic Income Units (BIUs)

- corridor shifts should be planned by institutions, negotiated in a series of multilateral exchanges with Council over a 7-10 month period, and recommended to the Minister

- the transition to new approved corridors be funded according to a growing five year moving-average until the mid-point of the new corridor is reached

- provision be made for Strategic Program Corridors to ensure rapid adjustment to priorities identified by Government in consultation with Council and institutions

- once new corridors are in operation compatible provisions are recommended for longer-term upward or downward system enrolment change

1.1 Introduction

Recently Ontario universities have experienced significant enrolment growth. Over the past two years, for example, the equivalent of a new university the size of McMaster University has been added to the system. The flow-through of enrolments resulting from these higher levels of intake will likely add another university approximately as large as the University of Windsor over the next two years. Of course no new universities have been built. These students have been accommodated, with some strain and at some cost, within existing facilities.

On social and economic grounds, access to university for all qualified applicants remains one of the firmest commitments of Government in Ontario. In 1963 Government formally declared this policy; successive governments repeated the pledge. Most recently, this commitment has been demonstrated through the provision of an Accessibility Envelope of $84 million over two years to ensure that every qualified applicant would find a place at one or another of the provincial universities.[1] Continued growth in demand for university entrance, coming as it does in a time of constrained funding will most certainly put this policy to a test.

Growth on this scale, within a context of general underfunding, exacts a toll upon the university system. If marginal resources come primarily from adding additional students, underfunded universities could be tempted to compromise their admissions policies to obtain needed funds. Students who are admitted to university only to discover that they have been merely accommodated through increasing class size, may well ask the question, "Access to what?"[2] Council is reviewing the issues related to accessibility policy in its Spring, 1989 Hearings to get a clearer understanding of the impact of this policy on university education.

Much of the growth over the past two years has been made possible by incremental grants. A stable system of formula finance for the universities set forth in Advisory Memorandum 86-VII was one of the early casualties of this sharp and somewhat unexpected growth. The time has come not only to put this accessibility money into the base or core funding of universities, but also to restore an orderly, predictable, equitable, accountable and straightforward system of formulaic allocation amongst institutions.

On April 20, 1988, the Minister of Colleges and Universities requested that Council provide advice on "a new approach to funding for 1990-91 and future years." In her letter she agreed with Council that the l987-88 and 1988-89 enrolment increases were not primarily related to the implementation of OS:IS and, therefore, the Accessibility Envelope funds provided ought to be folded into the base of the universities.

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1. Ontario Confederation of University Faculty Associations, "The Evolution of University Access Policy in Ontario", OCUFA Forum, October 1988., p. 1.

2. The Commission on the Future Development of the Universities of Ontario, Ontario Universities: Options and Futures, 1984, pp. 4, 6, 8.

> I also agree with the council's view that there should be a thorough and consultative review involving the university community with respect to the university funding mechanism for 1990-91 and beyond. The consultative process to be pursued by the council should take place in the context of the government's strong commitment to accessibility and excellence, balanced by sound fiscal management. I propose, therefore, that the council, after consulting fully with the university community, advise me on a new approach to funding for 1990-91 which takes into account enrolment growth in 1989-90 and previous years and which will promote a co-ordinated and planned approach to future enrolment growth.[3]

She requested that Council advise her on methods "to put more permanent measures in place to accommodate enrolment at new levels in a fair and cost effective way which maintains the quality of education being offered." Looking beyond the present situation she observed: "In the longer term, there will continue to be a need to ensure planned, positive institutional responses to increases in enrolment demand in 1989-90 and future years, whether they be of a temporary or a permanent nature."[4]

Over the Fall and Winter, Council engaged in an extensive, multi-stage consultative exercise with Ontario universities. Written briefs were requested, Council circulated draft proposals, the Interim Chairman discussed these ideas with representatives of each institution, and on two occasions meetings were held with Executive Heads. On the strength of these deliberations, and with substantial support from the institutions, Council recommends the method of funding upward corridor adjustments to accommodate current levels of intake briefly outlined in the Introductory Summary and developed more fully in the following pages.

During these discussions with the institutions many suggestions were received for possible uses to which the $84 million Accessibility Envelope might be put when it is folded into base funding. Some suggested that it ought to be deployed in part to increase the size of the Research Overheads Envelope which at present covers only a fraction of the real costs associated with universities' research endeavours. Others recommended that a certain portion of the $84 million be taken off the top to help alleviate the serious underfunding which has occurred in recent years. A group of institutions recommended that Council apply some of the Accessibility Envelope to relieve the significant Base BOI/Base BIU[5] disparities between institutions resulting from discounted enrolment growth in the early 1980s not completely eliminated in the 1986 Formula Revision. Council received representations as well concerning student fees, suggesting that fee adjustment should be addressed in this memorandum. These are all serious problems which deserve urgent Government attention. Council strongly recommends that the funding of the Research Overhead Envelope and the Base BOI/Base BIU disparities issues be re-examined as soon as possible. Fees and an appropriate level of funding will be addressed respectively in Council's Spring Hearings and in its annual advice on Government support of the university system. However, in this instance Council notes that the Minister asked Council to address the issue of additional enrolment, the purpose for which the $84 million was provided. The funds were put in place to pay for more places at university. It would be unacceptable to apply the money to any other purpose. Accordingly, in this memorandum Council recommends methods to permit a permanent increase in enrolment, to do so in a planned manner, and in such a way as to permit further enrolment adjustment in the future.

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[3] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. Paul Fox, April 20, 1988.

[4] Ibid.

[5] Base Basic Operating Income per Base Basic Income Unit. See Advisory Memorandum 86-VII for a full explanation of these terms.

2.0 Growth in the University System

2.1 Sources of Growth

The demand for access to university has suddenly increased. Total enrolment jumped by 6.5% over the past two years and first-year intake rose by over 13%. This increase has not been the result of normal demographic change. The 18-21 age groups from which universities draw the vast majority of their students have declined by 13.8% since 1983-84. University participation rates have risen to such an extent that they have counteracted this steady decline in the university-aged cohort. The participation rate amongst the university-aged population rose from 23.5% in 1980-81 to 29.4% in 1987-88 - a 25% increase.[6] This trend prevailed not only in Ontario but also throughout North America.

A closer look at this rising participation rate suggests that much of the increase came from women. In 1980-81, only 20.1% of the female university-aged population went on to university. By contrast in 1987-88, the last year for which accurate figures are available, fully 30.9% of that group entered university. This entirely encouraging development may be linked to broader cultural changes which opened up new career paths to women which required high degrees of formal education. Second, the apparent increase in university participation rates in the province of Ontario has been influenced by net migration into the province of university-aged people. For example, net migration of 19 year olds has increased from 1,245 in 1981-82 to 2,950 in 1987-88.

Why demand and participation rates have increased cannot be answered definitively. However, several likely hypotheses have been suggested. The severe recession of the early 1980s may have highlighted the importance of education in a tight labour market. During the 1980s the higher income and low unemployment prospects of university graduates relative to high school and community college students became widely known and may have influenced student preferences. In these more competitive times governments, parents and students appear to have placed a much higher value upon universities and university education to prepare individuals for a changing society and rapidly globalizing economy. Students have sought the more challenging, higher paying, more secure careers university degrees seem to promise in a more credentialized society. Government, in its public pronouncements, has emphasized the strategic importance of universities in economic growth, international competitiveness, knowledge creation, skill acquisition and the development of a more educated populace more readily adaptable to change. At the same time, universities are being called upon to play a broader role in the social advancement and integration of linguistic minorities and other under-represented groups. Moreover, as a general policy, Government has sought to extend the benefits of a university education to as broad a proportion of the population as possible. Whatever the reasons behind these changes, qualified students have appeared, requesting university entrance in record numbers.

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[6] Council of Ontario Universities, 1989.

Finally, it does not appear that the restructuring of the secondary school curriculum in Ontario as a result of OS.IS has yet to contribute significantly to the increase in demand for places in universities. The anticipated "double cohort" which theoretically would have resulted from the new opportunity to complete secondary school in four years rather than five has not materialized. It is not clear what impact OS:IS will have on university enrolments. Whether there will be an OS:IS bulge, whether it will be flattened or whether it will merely be delayed currently cannot be predicted. If there is an impact, it could be expected that the effect of the OS:IS change will last much longer than originally thought.

The most abrupt shift upward in participation rates has occurred within the past two years and it is difficult to predict with any degree of certainty whether this trend will continue or level off. However, there is little evidence to suggest that demand will abate for current levels. All of the unknown factors behind recent changes in enrolment behaviour justify making a detailed university demand study a top priority this year.

Figure 1 puts these recent events into broader perspective. Historically enrolment has increased, though not steadily over the past three decades. Sharp increases have been followed by a plateau, sometimes even temporary declines. Whether that will happen again remains to be seen. In any event, growth has usually been a permanent addition to demand and on that basis alone grounds exist for providing a stable funding base beneath these higher enrolment levels. It may well be that more enrolment increases are in the offing as a result of further participation rate increases and an OS:IS bulge.

2.2 The Institutions Respond

Ironically, the universities of Ontario had to cope with enrolment pressure in this decade initially under severe fiscal restraint which greatly discouraged system enrolment growth. Over time that environment changed, especially after 1985. As a result of the vagaries of changing public policy, those universities which grew in the early 1980s were compensated at much lower levels than those which could grow in the later 1980s. At the same time universities undertook a significantly broadened research mandate, the overhead costs of which added a further burden to scarce institutional resources.

As Government increased its spending on university education, it did so having to choose from among a number of pressing policy priorities, particularly in the health and social services sectors. As a result, while university funding improved modestly to accommodate both the growth in demand and the new role universities were expected to play in the economy, relative spending on universities did not improve. For 1989-90 alone, Government operating support to Ontario's universities fell 6.1% below the level recommended by Council in Advisory Memorandum 88-IV. Universities have been making do with less.

Nevertheless, universities proved extremely responsive to the societal need for access, in some cases well in advance of Government policy. It is a considerable compliment to university management during the 1980s that the system became more efficient. For better or for worse uneconomic offerings were trimmed, staff student ratios increased, classes grew in size. Seen from one perspective it could be said that the universities of the late 1980s were much more productive than a decade earlier. Indeed, Council believes that universities should be commended for the efforts they have made, not always with Government support to accommodate as many school leavers and returning mature students as they have. If there are approximately 30% more full-time undergraduate students in the system than a decade ago and funding for those students in real terms has declined, the universities have certainly faced up to their social responsibilities in a constructive and creative fashion.

2.3 Government Initiatives

In Speeches from the Throne and in numerous public addresses Government has indicated that both in the training of a technologically adept population and the conduct of globally competitive research in conjunction with industry, universities are key institutions in Government's social and economic plans.

Accordingly, Government has directed a number of initiatives toward the universities to achieve these broad goals. First and foremost, it provided funds - $84 million over two years - to increase accessibility. Second, funds were set aside to enhance opportunities for underrepresented groups. At the same time Government provided new money to speed up the process of faculty renewal, to finance program adjustments, to pay for the incremental costs of bilingualism, and to help defray the overhead costs associated with research. Outside of the universities' grants allocations the Premier's Council launched its Centres of Excellence programme which would involve the flow of $100 million over 10 years to fund inter-university research consortia in conjunction with the private sector.

Many of these programmes involved targetted funds, at least initially, as Government sought more directly to influence the response of the university sector to the changing environment. Improvements in the base allocation did not however keep pace with inflation. Government did, however, slow the downward trend of underfunding, and might have achieved greater funding improvement had it too not been overtaken by the sizeable jump in university applications over the past two years. While the rate of underfunding has abated universities are far short of possessing resources comparable to what they had a decade ago.

3.0 Costs of Growth

Growth has not been without its costs. In retrospect, it is remarkable that institutions have been able to accommodate as much growth as they have. Many are already at capacity as they see it and cannot respond to additional demand without additional capital resources. Others have managed to squeeze a few more students into crowded programs to respond to an obvious public need on the one hand and maximize short-run income on the other. For some institutions at perceived capacity, the inducements of growth income have been too tempting to forego in the absence of other marginal income. If quality is not compromised in the process that is a good thing. If on the other hand, quality considerations take second place to mere accommodation, that is another matter. There are strong indications that this has, to a certain extent, occurred already.

There are, of course, limits to the number of additional students who can be added to existing levels without diminishing the quality of the experience for all students. Without adequate classrooms, faculty, library resources, labs, computers and offices, universities are less able to meet the educational needs of their students than they have been in the past. Indeed, over time an exclusive preoccupation with access may lead to countervailing forces from students, faculty, employers and alumni to resist what could be perceived as a deterioration in the quality of education. If universities can not or will not put limits on class size, the fire marshall or collective bargaining eventually will.

A stabilized funding regime will make it possible for academic and quality considerations to reassert themselves. In some instances the costs of growth have involved crowding, student and faculty alienation in a deteriorating environment, and a qualitative change in teaching methods. Larger classes mean less access to faculty, less personal attention to academic needs, and the widespread adoption of multiple choice and formulaic assignments. Quality is difficult to measure, it diminishes not with a bang but a whimper. But it erodes nonetheless when enrolment growth is not matched by improvements in instructional resources.

As the system enters the 1990s, Council believes that not much more enrolment can be expected to be accommodated in this way. Additional accessibility will require new permanent faculty, new buildings, additional labs and updated equipment. Moreover, concern for access, to the exclusion of other funding issues, in a situation of general underfunding, further compromises the universities' ability to fulfil their research, teaching, and broader social and economic missions.

The great press of numbers in recent years has taken a toll upon existing physical facilities. Old physical plants, and even newer ones in need of repair have had to carry the additional burden of growing numbers. Portable classrooms have been a part of the permanent capital stock on campuses for years. Furthermore, universities face the need to look off campus for make-do and often expensive rented accommodation. Capital allocations have not been able to keep up with both the growth of demand and depreciation.

The final strain of growth, and by no means the least, has been that it overrode the corridor funding approach. If marginal dollars were attached mainly to additional students, institutional corridors ceased to have any operational force. More precisely, the accommodation of additional students and the generation of revenue associated with them tended to dominate institutional behaviour to the detriment of academic plans.

The time has come, as the Minister's reference to Council points out, to reconcile growth with stability and planning. Council believes that the best way of achieving this goal is to re-establish the corridor system whose enduring validity has not changed as a result of these events; to negotiate new university corridors at higher levels with appropriate funding, and to develop a mechanism for upward and downward enrolment adjustment consistent with the principles of the institutional corridors. It must be understood that this does not address the larger issue of restoring adequate base funding to address the long-term needs of Ontario's universities, but is an essential part of the regularization of university funding to allow universities to plan for the 1990s.

4.0 Choices

Years of growth with inadequate funds to maintain the quality of programs have brought the universities of Ontario to a turning point. Accordingly, Government faces a series of urgent choices. A policy of muddling through, of expanding base budgets at less then the rate of inflation, of targeting funds for special purposes without adequate regard to the base, of inducing institutions to take more students even when academic and quality considerations might argue for an alternative policy, has run its course. More of the same policy will not produce more of the same from the universities. Rather, universities believe the time has come for a major change in policy. It will either be co-ordinated change, guided positively by public policy, or if the present regime continues, the policy change will take the form of a university system gradually disintegrating under its accumulated pressures. It will not be a dramatic collapse. Rather, the system will simply drift towards disillusionment, burdened with expectations it cannot possibly maintain.

Council's convictions on this matter were reinforced by consultation with universities. Existing levels of enrolment cannot be sustained with the funds presently available. This point was effectively made to Council during its discussions on formula revision with Executive Heads in the Fall. Since that time, Council has addressed the issue of funding adequacy and its impact on formula revision in a vigorous manner. Council concludes that it is not possible, regardless of the type of formula mechanism used, to accommodate adequately enrolment expansion beyond current levels without additional funding to meet this growth. Council reviewed mechanisms for funding the projected level of enrolment growth resulting from the flow-through of current all-time high levels of first-year enrolment and found the outcome, in terms of the impact on funding per student, to be unacceptable. Council does not believe that institutions would nor could prudently accommodate projected flow-through enrolments within the $84 million currently available in the Accessibility Envelope.

Under the current Accessibility Envelope, an increase of approximately 24,500 BIUs has been accommodated in the past two years, representing a 6.5% increase in total BIUs since 1986-87. Full-time first-year intake increased by about 13% in this period. Council has developed projections of the flow-through impact of maintaining current levels of intake using recent University Audit Report and University Student Information System data.[7] As Table 1 indicates, Council estimates that total BIUs will increase by 9,807 BIUs beyond or 2.4% in 1989-90, an additional 7,005 BIUs or 1.7% in 1990-91, and a further 2,647 BIUs or 0.6% in 1991-92 as a result of the flow-through of current levels of intake. The cumulative impact will be an additional 19,460 BIUs beyond current levels added to university system enrolments under the assumptions of constant intake and flow-through based on historic retention rates. Council feels that these flow-through estimates may be conservative given the assumption built into the model used that graduate enrolment will not increase.

Flow-through of this magnitude has significant funding implications. If Government wants these increased numbers of students to be accommodated with intake at current levels, it will have to provide additional funding to cover the costs of these enrolments. Thus Council believes that the first step in the formula revision process is to estimate the funding required to accommodate current levels of demand for university entrance on a sustained basis.

During the first year of the Accessibility Envelope, funding increases were accounted for at average revenue (average Base BOI/Base BIU) levels and commitments were made to fund the flow-through of these additional students. During the second year of the Accessibility Envelope, the BIU value was a resultant of the vagaries of competitive entrance policies of the several institutions. Council has been convinced that when the final discount on 1988-89 Accessibility BIUs is known it is highly unlikely that institutions would be willing to further increase enrolment levels at this rate. The outcome was the product of action based upon incomplete information in a highly uncertain environment, and that experience has brought about a revision of expectations.

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[7] These projections are based on a retention rate model which uses historic full-time undergraduate retention rates. First-year levels were held constant and the flow-through of increases in intake were projected for the years indicated in Table 1. The rate of change in full-time undergraduate enrolment was applied to total undergraduate BIUs. Graduate BIUs were held constant at 1988-89 levels.

Council recommends that incremental BIUs be valued at Base BOI/Base BIU for the purposes of estimating the funding implications of the flow-through of existing enrolment levels. The reasons for this recommendation are five-fold. First, fully funded BIUs provided the initial inducement in the Accessibility Envelope to accept additional students in a time of funding constraint. Second, the value of discounted BIUs of the second year of the Accessibility Envelope was an unknown quantity and, in any event, related to short-term funding. Third, some hard pressed universities scrambled to take as many accessibility BIUs as possible because that was the only way to obtain additional income at a critical time. They would not willingly repeat this behaviour indefinitely. Fourth, the Council believes that in the short-term some variable costs can be funded at marginal rates, but that in the longer-term, the costs of these activities increase as they become more fixed. An example of this phenomenon is in the area of teaching cost. If these BIUs are to become permanent additions, costs will inevitably increase as the burden of instruction shifts from relatively inexpensive temporary or part-time instructors to full-time faculty whose higher salaries and progress-through-the-ranks increments must be taken into account. Finally, Council will not recommend to Government a more heavily discounted BIU than the present Base BIU whose present level Council believes to be inadequate. Such action would only compound the underfunding problem and contribute further to a deterioration of quality.

Table 2 outlines Council's estimate of the incremental funding needs in future to support the flow-through of current levels of intake under the assumption of Base BOI per Base BIU funding. These figures are calculated in 1989-90 dollars. As indicated, after taking into account the current funds available from the Accessibility Envelope, an additional $46.7 million in operating grants will be required in 1990-91, $15.5 million in 1991-92, $11.1 million in 1992-93, $8.0 million in 1993-94, $2.4 million in 1994-95, and $7.4 million in 1995-96 beyond current accessibility envelope funding. The cumulative steady-state addition to operating grant support is $91.1 million.

Accordingly, Council *recommends to the Minister:*

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INCREMENTAL FUNDING FOR INCREASED ENROLMENT DUE TO THE FLOW-THROUGH IMPACT OF CURRENT INTAKE INTO ONTARIO UNIVERSITIES

THAT at a minimum for 1990-91 an additional $46.7 million in operating grants be provided in support of increased enrolment resulting from the flow-through of existing levels of intake, and, that Government commit to the funding of subsequent increases in enrolment according to the schedule outlined in Table 2. That, since these funds are calculated in 1989-90 dollars, they be escalated appropriately for inflationary and service level costs.

If the Government of Ontario, in view of its many other commitments cannot provide the funds identified by Council as needed to support increased university enrolment, then it must accept that under the present circumstances universities cannot provide access to a quality education to all qualified students. If the flow-through of additional students taken in as a result of the two years of accessibility money is not funded, the universities will necessarily be forced to begin reducing first year intake this Fall. Council's estimates of the reduction in intake which would result from not providing the incremental funds identified are outlined in Table 3. Council estimates that if adequate flow-through funding is not provided by Government, universities would be required to reduce first-year full-time undergraduate intake by approximately 4,500 students. The funds recommended will be necessary to maintain the average value of BIUs at their present inadequate level. If Government chooses not to provide adequate funds, universities ought to be permitted to reduce enrolments to provide adequate funding for the number of students admitted.

However, Council believes that provincial universities are far too important to the economic and social well-being of the province to be forced to reduce their commitments to the population because of inadequate resources. Conversely, it would be regrettable if they had to contract dramatically to bring their commitments into line with constrained income. It would be deplorable if universities find themselves forced to expand if the cost is an erosion of quality. The restoration of the corridor funding system at new higher levels of enrolment and funding recommended in this Advisory Memorandum represents a necessary first step towards providing universities the resources needed to meet the challenge of the 1990s.

5.0 The Operating Grants Formula

5.1 The Case for Corridors

After an extensive consultative exercise with universities in 1986, Council developed the concept of "corridor funding" and recommended in Advisory Memorandum 86-VII it adoption by Government for allocating funds to Ontario universities. Government accepted this advice. At that time, Council reaffirmed the existing objectives of the operating grants formula -stability, predictability, equity, accountability and simplicity - but gave highest priority to funding stability.

Council stated that the funding mechanism should aim to:

(a) protect institutions' funding from the impact of the actions of other institutions;

(b) reduce the incentive for institutions to use growth for the purpose of increasing their share of total operating grants;

(c) provide the opportunity for quality considerations as well as for quantity considerations in academic decisions; and,

(d) reduce short-term variations in funding which may result from fluctuating enrolment patterns in future years.[8]

The corridor system provided for more predictable income in the short-run which would in turn permit long range planning. The corridor approach also tended to enhance of the quality of higher education by diminishing institutional competition for student numbers, which tended to lower admission standards. Finally, corridors localized decision making as to curriculum and mission. The arguments advanced for the corridor system then, agreed to by the institutions (a consensus repeated at the Funding Committee's recent meeting with the Executive Heads) and accepted by Government, continue to hold notwithstanding the stresses and strains of the last two years.

Essentially this new approach to funding drew a corridor of ±3% around a 3-year base of BIUs (1983-84, 1984-85 and 1985-86) for each institution. As long as a 7-year Moving-Average of enrolment fluctuated within this corridor, university income would not change from the amount provided at the corridor mid-point or Base BIUs level. If an institution's Moving-Average dropped below it 3% corridor floor, it would lose funding proportionately. If the Moving-Average increased beyond the 3% corridor ceiling it would not necessarily receive additional funding. However, institutions could apply to Council with a plan to raise their institutional corridors above the 3% corridor and thus increase their income accordingly. Alternatively, institutions facing persistent declining enrolments could request lower corridor levels to stabilize their revenue sources as they made adjustments to lower enrolment and income prospects.

Such a system of stabilization was attractive to the institutions in the assumed conditions of a stable or potentially declining enrolment demand. However, for reasons spelled out above, enrolment rose dramatically soon after the implementation of this system. Government provided an additional $84 million over two years to accommodate the new students but the new money funded enrolment increases from all sources, new first-year students, graduate enrolment increases, and increases resulting from higher retention rates. Since all enrolment increases beyond 1986-87 levels were funded, increases within corridors led to additional revenue. In effect, the Accessibility Envelope funds temporarily over-rode the operation of the corridor system.

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[8] Ontario Council on University Affairs, "Advisory Memorandum 86-VII, Modification of the Operating Grants Formula", Thirteenth Annual Report, 1986-87, pp. 156 and 157.

5.2 The Rationale for Corridors

A corridor approach to university funding, which buffers grant income from a direct relationship to enrolment, but also makes income ultimately sensitive to major enrolment changes, has a great deal of merit both from a Government point of view and from an institutional perspective. The history of university funding in Ontario has been in large part a story of progressive retreat from the direct linkage of enrolments to income. Government has rejected the open-ended access to the treasury implied by a direct linkage of current levels of enrolment to income. Government also rejected the competitive model which sets institutions struggling to maximize their shares of a fixed pot of funds, a situation which ends with those with the lowest standards gaining the most. Over the years Council has sought, and in the corridor system developed, a middle course, one which stabilizes university incomes to permit planned change, provides a flexible degree of accessibility with given resources, insulates universities from the short-run actions of other institutions, and which in the interests of public accountability ultimately remains enrolment sensitive. Several factors argue the merits of corridor funding.

First, income stability within the corridor creates a situation where planning over more than a one year horizon becomes possible. For institutions such as universities such a long planning cycle is highly desirable. For most programs it takes 4 to 5 years after planning a change to see the result in the form of graduates.

Second, enrolment is only a proxy for costs. Universities have many fixed costs such as libraries, computer facilities, physical plant and maintenance costs, support staff and to a certain extent faculty which do not vary directly with the size of the student population or do so in a non-linear fashion. Thus, to tie income too closely to enrolment would ignore the importance of these fixed costs which are unrelated to changes in enrolment.

Third, corridors serve to protect financially institutions over the short-term from the adverse consequences of other institutions' behaviour. In the short-run an institution cannot expand its income at the expense of other institutions merely by increasing enrolment. On the other hand, this has the effect of dissuading institutions from growing. Relative fee levels and the prospect of fully funded long-term growth will determine whether or not universities are likely to fill the tops of their corridors.

Last, the income stability and predictability afforded by corridors allows institutions to concentrate their energies not upon marginal income to be gained from enrolment adjustment but rather upon the quality of education considerations which they insist are of fundamental importance. A university is not the kind of institution which ought to be driven by its short-run market calculations. Rather, if the universities are to serve Ontario as critical centres of knowledge and research, their curricula, planning, teaching and research agendas ought to be guided internally on a long-range agenda. Stable income thus permits these quality criteria to be reasserted more forcefully in university counsels.

6.0 Objectives of Formula Revision

The current revision to the operating grants formula must address the immediate issue of folding the $84 million in Accessibility Envelope funds into base funding, recognizing the purpose for which these funds were provided and the desire by Government to promote a co-ordinated and planned approach to accommodating enrolment growth. Council must also address, in a meaningful manner, Government's desire to enhance accessibility and excellence within constrained funding. Two factors are of particular importance. First, it is important to identify a mechanism to fund the growth enrolment in future years resulting from the flow-through impact of the higher levels of intake initiated under the Accessibility Envelope. Second, it is critical to identify ongoing mechanisms to accommodate, in a rational manner, future system-level increases or decreases in enrolment demand.

Therefore, Council's objectives for this formula revision are:

(1) to ensure that all funding envelopes operate in a co-ordinated manner to provide institutions with stable core funding;

(2) to transfer in an equitable, co-ordinated and planned manner short-term Accessibility Envelope funding to longer-term core funding, reflecting the stated objectives of these Accessibility Envelope funds;

(3) to provide an ongoing mechanism to facilitate further changes in institutional funding levels and activity levels in a co-ordinated and planned manner;

(4) to address Government's desire to enhance accessibility to university education in a period of fiscal constraint; and

(5) to allow Government with the advice of Council to induce new program initiatives in areas of strategic priority.

To achieve these objectives it is proposed that a system of institutional corridor shifts be negotiated. This would lead to stabilized funding for the university system at new higher levels of enrolment. Council takes into account the possibility of further system-wide enrolment increases and proposes a mechanism compatible with the corridor approach, to accommodate this additional growth if and when it should occur. Finally, Council recommends a new mechanism for Strategic Program Corridor shifts to permit extraordinary adjustment to specific programs deemed to be of overriding public importance either from an academic or a societal point of view.

Restoring the system of corridor finance has obvious appeal from an institutional perspective. It should similarly recommend itself to Government. The proposal calls for Government to commit to funding the flow-through of current levels of enrolment intake thus creating a permanently larger university system. In doing so, Government has a reasonable assurance that there will be no continuing accessibility pressures for the short-run, and perhaps for the long-term as well. In the short-run institutions will have an incentive to take in as many qualified students as possible in order to reach their new corridor mid-points. Only then would they receive the funding protection afforded by a corridor. Until that time, they receive funding commensurate with existing enrolment levels. Thus, this scheme has an implicit bias towards sustained access.

Council's proposal also has a built-in accessibility provision which provides some buffering of short-term upward enrolment pressures once new corridor levels have been reached. Under this proposal institutions are responsible for the first 3% of system enrolment growth. If total enrolment should breach the top of system corridors in any one year (an estimated 12,000 to 13,000 increase in system BIUs) then the provisions of a new Accessibility Envelope would come into effect. Should enrolment levels average above 3% over three years, then a general upward movement of corridors would have to be funded. But it is important to stress that while universities receive stability, security and planning predictability from this corridor system, if the money is provided Government receives reasonable assurance that access to universities will be maintained at present levels of intake and it will have an adequate planning horizon from funding longer-term growth. Further, this revised formula is more sensitive to societal need and Government policy than its predecessor as a consequence of the inclusion of the Strategic Programs Corridor concept.

6.1 A Method of Corridor Adjustment

Section 7 of this Advisory Memorandum spells out in detail a precise method of phasing-out the existing accessibility fund, and setting in motion a process whereby the freed-up $84 million and the additional $91.1 million in flow-through funds committed over six years would finance a shift to new planned corridors. Council does not believe that a centrally directed approach to corridor adjustment is appropriate for a system of autonomous institutions. Council is convinced that this shift should be left mainly in the hands of the institutions themselves. They should carefully plan their intended new corridor levels on a program by program basis. The institutions will be given an opportunity to reflect upon each others plans. On the basis of this shared information the universities would be allowed to adjust downwards proposed new corridor levels. In the event of inconsistencies in the proposals Council would require the institutions to attempt to resolve problems of apparent over or undercapacity themselves. Only in the event of a failure to reach consensus among affected institutions would Council then intrude as an arbiter. Such a system of consultations between institutions, however cumbersome and time consuming, is nevertheless in the best interests of institutional autonomy and academic freedom.

Council will establish a new level of system Base BIUs in such a way as to ensure that institutions receive average Base BOI/Base BIU funding for these marginal enrolments. The reasons for funding these permanent additional BIUs at average revenue are essentially the same as those provided for using average revenue to determine the funds available to finance corridor shifts. The average Base BOI/Base BIU rate will afford reasonable funding for the additional students, and ensure that these upward corridor adjustments will produce a narrowing of individual institutions' Base BOI/Base BIU ratios within the system. Determination of the appropriate number of BIUs will thus depend upon Government declaring in advance the sum of money to be made available to fund corridor shifts. The larger and longer the commitments, the greater the number of BIUs that will be added. Such a system calls upon Council to take a more active role in co-ordinating institutional plans than has heretofore been the case, but it should be recorded that it has been encouraged to assume this role by the institutions themselves. In subsequent memoranda Council will have to develop criteria for adjudicating corridor conflicts in the event that the institutional plans accommodate higher levels of enrolment than Council's judgement of the total number of fully funded BIUs available.

The method for establishing new corridors at higher levels of enrolment is set forth in Section 7 has been worked out over the past year in close consultation with the institutions and other interested parties. It has the support of the institutions, though this endorsement is not unanimous or enthusiastic in all cases. This plan represents a necessary first step towards restoring stability to the system after several years of expansion. It also provides a basis upon which discussion of research overhead funding, equity, and an appropriate level of funding for the system might once again be considered.

7.0 Formula Structure

7.1 The Current Corridor System

The current corridor system as outlined in Advisory Memorandum 86-VII will remain in place with one modification, the seven-year Moving-Average will be shortened to a five-year Moving-Average. The new factors introduced in this document are clarifications and additions to the mechanism outlined in 86-VII. Advisory Memorandum 86-VII remains the point of departure for the revised formula.

Under the corridor system of funding, institutions have a Base level of Basic Operating Income (BOI), BIUs and Formula Fees. As long as an institution's Moving-Average BIUs do not drop below its corridor floor its Formula Grants are unaffected by enrolment change. Under the modifications proposed in this Advisory Memorandum the funding provided for existing institutional Base BIU levels will be unaltered. Changes in funding will occur for BIU growth beyond current Base BIU levels. This distinction is deliberate. Council believes that it is extremely important to ensure that existing levels of Formula Grants funding are not affected by the provision of funding for enrolment growth?[9]

7.2 Transition from Accessibility Envelope Funding

7.2.1 Phase-out of the Current Accessibility Envelope

A major concern of Council has been the apparent mismatch in funding mechanisms between the Formula Grants Envelope and the Accessibility Envelope. The Formula Grants Envelope funds institutions up to the level of their Base BIUs (the average of their total BIUs in 1983-84, 1984-85 and 1985-86). 'The Accessibility Envelope funds institutions for enrolment growth above 1986-87. Several institutions' 1986-87 BIUs were significantly above their Base BIU level and have not received funding for these BIUs from either the Formula Grants Envelope or the Accessibility Envelope. On the other hand, several institutions' 1986-87 BIUs were below their Base BIU level and have had these enrolments funded through both the Formula Grants Envelope and the Accessibility Envelope. Such an outcome renders the current allocation under the Accessibility Envelope inappropriate for long-term funding. The mechanism has eroded the usefulness and effectiveness of institutional corridors.

Council has been asked to incorporate the funds currently provided for enhancing general accessibility into "base" or "core" funding. In reviewing this issue, Council has concluded that there is little reason to prolong the current Accessibility Envelope beyond ensuring that adequate recognition of past accessibility enrolment must be provided. Nevertheless, this is an important consideration. In phasing-out the Accessibility Envelope two factors have been uppermost in Council's thoughts: the transition to "base" or "core" funding must reinforce the integrity of the corridor funding system; and, the transition from Accessibility Envelope funding must adequately recognize Government's commitment to funding the flow-through of accessibility enrolment.

As the Minister noted in her April 20, 1988 letter to the Chairman of Council, "the ministry does not have a sufficiently detailed data base to identify and track this incremental enrolment separate and apart from other enrolment." It might be added that since the Accessibility Envelope operated on the basis of the net increase in total enrolment from one year to the next, even with a detailed data base it is not possible to identify the incremental accessibility enrolments and track them. The best that can be done is to provide rough-justice in recognizing the flow-through of accessibility enrolments.

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[9] In the course of its review of the operating grants allocation mechanism, Council found some confusion in terminology. Council refers to the funding envelope for corridor allocations as the Formula Grants Envelope. Government has changed the terminology from that accepted in Advisory Memorandum 86-VII to Base Grants Envelope. This modification by Government has created confusion and a lack of understanding in the operation of the corridor system, particularly with respect to the notion of Base BIUs, Base BOI and Base Formula Fees. Much of this confusion could be overcome by Government reverting back to the original terminology. Council suggests that this be done.

Enrolment increases have occurred at the undergraduate and graduate levels for both full-time and part-time students. However, a large portion of the increased enrolment has come from increased (first-year) intake of full-time undergraduate students. Therefore, Council has chosen to provide for the flow-through of accessibility enrolment roughly according to system average full-time undergraduate retention rates.

Some institutions have argued for using individual institutional retention rates, noting that their institution's retention is higher than the average. Council does not support this approach for three reasons: (1) currently collected year-of-study data are unaudited and for particular institutions have known anomalies for which arbitrary adjustments would need to be made, (2) it would not be worthwhile to set up an elaborate new tracking mechanism to attempt to more accurately track flow-through enrolment when these funds are being transferred back to universities through corridor shifts, and (3) full-time undergraduate retention rates are a proxy for an unquantifiable flow-through of net changes in total enrolment, there is no way of knowing whether or not the students identified are "accessibility students".

Accessibility Envelope funding will be phased-out for all institutions in the following manner: year 1 - 100%; year 2 - 85%; year 3 - 70% and year 4 - 40% and year 5 - 0%. This simple transition is complicated by the fact that there are two years of accessibility increases and that Government has committed to full funding for 1989-90 for both years. Table 4 outlines the Accessibility Envelope phase-out. Institutions' actual retention rates may vary from these rates, but, as noted above, that the Accessibility Envelope captured all increases in BIUs above 1986-87 levels, Council believes that this average retention rate approach is appropriate.

7.2.2 Incorporation of Accessibility Funding Through Corridor Shifts

Accessibility Envelope funds freed-up by the phase-out of the current envelope and those additional funds committed by Government for flow-through recognition will be transferred into base funding to institutions which undertake upward shifts in their Formula Grants Envelope corridors and Base BIUs. These corridor shifts will be funded from current Base BIU levels or the mid-point of the old corridor to the new corridor Base BIUs (that is, the mid-point of the new corridor).

Council believes that the original proviso outlined in Advisory Memorandum 86-VII, that corridor shifts must be greater than +3% of the current Base BIU or corridor mid-point, should not apply to the current situation. Institutions were encouraged by Government policy and the Accessibility Envelope to absorb more students in the past two years. For some institutions, the level of enrolment increase sustained, as well as the flow-through of the increased enrolment, would not warrant a corridor increase of +3% above Base BIUs. Forcing institutions to increase enrolment to the level identified in Advisory Memorandum 86-VII could be damaging to the institution and the system in two ways. First, if institutions are forced to grow beyond flow-through levels in order to attain increased funding, a destabilizing competition for students might be created which demand may not warrant. Second, Council and Government would be forcing institutions to act contrary to their institutional plans and their judgement of the best interest of teaching and research in the institution. This again could have a destabilizing effect on institutional funding if the institution's enrolment cannot reach the required level, or, it may lead to overcrowding if the institution does not have the physical plant to accommodate the increased enrolment.

Under this approach, the increment of "Growth BIUs" between the old Base BIU level and the new Base BIU level may be funded differently from individual institution's Base BOI/Base BIU. The rate of funding for Growth BIU will be equal for all institutions and will ultimately equal the current system average Base BOI/Base BIU.

Institutions receiving a corridor change will in effect be given a new Moving-Average. The funding of the corridor will be phased-in the manner outlined in Table 4. That is, institutions receiving a corridor shift will be funded according to the positive difference between an institution's Base BIUs and its new "growing Moving-Average", where the Moving-Average begins as a single slip-year count of 1989-90 BIUs and adds one year in each subsequent year until 1994-95 when it becomes a fully functioning 5-year Moving-Average. In the transition from the old corridor to a new corridor, institutions will be funded according to the "growing" Moving-Average until the Moving-Average reaches the new Base BIU or new corridor mid-point level. At this time the institution is afforded the protection of a new ±3% corridor around the new Base BIU level.

Council has devised the transitional arrangements in this manner to minimize the possible dislocations in funding which a 5-year or 7-year moving-average might introduce. It is recognized, however, that flow-through funds must be provided more rapidly under this proposal. It also acknowledges that institutions will need to be precise with their corridor proposals since the transitional funding arrangements are very sensitive to enrolment change.

Institutions not receiving a corridor increase will not have their Moving-Average adjusted in the manner outlined in Table 4. They will continue to be afforded the buffering from enrolment change found in a multi-year Moving-Average. However, the length of the Moving-Average for these institutions will be reduced from 7 years to 5 years. This will increase the influence of any one year in the Moving-average from 14% under a 7-year Moving-Average to 20% under a 5-year Moving-Average.

During the transition period, two complications could occur: (1) there are insufficient funds to fully fund the "growing" Moving-Average at average Base BOI/Base BIU because Accessibility Envelope funds are not freed-up quickly enough; and (2) some of the "incremental BIUs" could in a sense be funded twice through the Accessibility Envelope and the "growing" Moving-Average. The double-counting issue is dealt with by capping total incremental funding in the transition at a level equivalent to "growing" Moving-Average BIUs less Base BIUs. For example, in 1990-91 the proportion of Moving-Average BIUs to be funded will equal:

[MA BIUs - Base BIUs] - [Proportion of Accessibility]
Envelope BIUs still funded

or

[1989-90 BIUs - Base BIUs] - [70% 1987-88 + 85% 1988-89]
Access BIUs Access BIUs

The resultant BIUs will be funded at a maximum of average Base BOI per Base BIU. If insufficient funds are freed-up from the Accessibility Envelope or provided by Government, these adjusted Moving-Average BIUs will be funded at a reduced average rate. Nevertheless, a discounted BIU value is only a possibility in the short-term since the sum of all new corridors will not be allowed to exceed the level where average Base BOI/Base BIU can be provided.

In summary, transitional funding will be provided as follows:

1. Accessibility Envelope funding will continue to be given first priority until it is fully phased-out under the procedures outlined above.

2. The residual funding freed-up from the phase-out of the Accessibility Envelope and any additional funds provided by Government for flow-through recognition will be allocated according to the growth in new "growing" Moving-Average BIUs of each institution receiving a corridor shift (i.e. the difference between the new Moving-Average BIUs and current Base BIUs) at a maximum rate of average Base BOI per Base BIU.

3. In order to ensure that enrolment growth is not double-counted through the Accessibility Envelope and the Formula Grants Envelope, Moving-Average BIUs will be funded to a maximum of Moving-Average BIUs less the sum of current Base BIUs and less the proportion of Accessibility Envelope BIUs still funded.

4. When the phase-out of the Accessibility Envelope is completed, and institutional Moving-Average BIUs have reached the new Base BIU level, incremental BIUs above the old Base BIU level will be funded at a rate of average Base BOI/Base BIU (calculated using old Base factors).

7.3 Negotiation of New Corridor Levels

New corridors will not be formulaically determined. New corridor levels will be determined in a planned manner with an exchange of information between universities and negotiations with Council.

7.3.1 Multiple institutional adjustments

One of the most immediate problems facing Council is the simultaneous negotiation of several corridor shifts, as a result of the movement into base funding of Accessibility Envelope funding and the accommodation in a more permanent manner of current enrolment and the flow-through growth created by current intake levels. Several factors were weighed when addressing this issue including the appropriate locus for planning institutional change and the manageability of conducting several negotiations simultaneously in view of Council members' time and limited staff resources. Council has decided that the most appropriate role it is Council is not to be a central planner, but to be a co-ordinator of change, ensuring the compatible outcome of individual institutional choices from a university system and public policy perspective.

Council has developed a multi-stage process of consultation on institutional corridor changes to be co-ordinated by Council over a 7 to 10 month period. Under this proposal the locus of planning will be in the hands of universities, both individually and jointly. Council will intervene when:

i) institutional plans are inconsistent with system objectives and needs;

ii) institutional plans are inconsistent with other institutions' activities and plans; or

iii) with the funds available, the sum of individual institutional corridor changes cannot be funded at a rate of average Base BOI per Base BIU.

The Corridor negotiation process will be set up as follows.

Round 1 - Call for proposed corridor changes

The first step in a multiple-institution corridor adjustment procedure would be for Council to call for institutional proposals. At this time Council would identify a number of factors to enable institutions to make informed judgements, including the funds available, global parameters, and the information required of an institution which proposes to declare a new corridor level. Government will need to have announced the level of additional funding available prior to this stage.

a) Funds available

The total funds available to the system for use in corridor change will be identified ($84 million + flow-through funding). This will include the amounts available annually for transition to the new corridor level. This is a function of the phase-out of the Accessibility Envelope and Government's willingness to provide flow-through funding.

Adequate funding of the flow-through of existing enrolments will require a multi-year funding commitment from Government. If full flow-through funding is pre-committed by Government, Council will negotiate this level of funding and identify the number of BIUs which can be funded at average Base BOI/Base BIU. In the event that Government is unable to provide multi-year commitment, Council will negotiate two levels of corridor changes:

(1) the level of corridor changes which can be funded with currently committed incremental funding (at a minimum $84 million); and

(2) the corridor levels if flow-through funding were to be provided.

If Government provides funds beyond the original commitment in subsequent years, the new institutional corridor mid-points will be raised proportionately to the difference between the initial revised first corridor level and the full flow-through level. The BIU value will not be allowed to be devalued by the latter action. Under these procedures if system enrolment demand is unable to reach the higher corridor levels, Government would only pay for enrolment levels attained.

(b) Global parameters for corridor change

Council will need to indicate to institutions the following general factors which will be examined for potential inconsistencies or conflicts:

i) **Enrolment demand factors**: The level of response to estimated system and regional demand needs will be examined to see if proposed corridor adjustments will provide too much or too little access relative to projected student demand and the funds available. This will be determined for the most part by funding levels provided by Government since Council is requesting, at most, recognition of flow-through of current levels of intake, and will identify the number of BIUs to be funded with the funds provided.

ii) **Inter-institutional impact factors**: The degree of inter-institutional impacts resulting from increased enrolment levels at one institution which may jeopardize the maintenance of corridor levels at other institutions will be examined.

iii) **Program mix factors**: Changes in enrolment and intake levels in broad program categories will be assessed for potential inconsistencies.

To a great extent, universities will be responsible for assessing their capacity to attain their proposed corridor levels. They will make decisions on their ability to achieve their new corridor levels and absorb additional enrolments. Council will intervene when such decisions are inconsistent with one of the factors identified above.

(c) Institutional declaration of desired new corridor mid-point

All institutions which wish a corridor adjustment would be required to declare the desired level of their new Base BIUs or corridor mid-point. They will also be required to provide Council with the additional information required to make informed judgements about proposed changes. Information required will include recent enrolment data and projected enrolment levels at the proposed new corridor level by broad program categories (for example, Statistics Canada's program sectors). Institutions will also be required to provide information on current and planned intake levels for direct entry full-time undergraduate intake categories used by the Ontario Universities Application Centre and other undergraduate intake points such as advanced standing students from Québec CEGEPs.

To aid the planning of all institutions requesting a corridor change, the declared new corridor level will be the maximum corridor allowed. That is, in the course of negotiation institutions will be allowed to modify the corridor proposals only downwards unless Council specifically requests that it be raised. This will ensure that as a result of the first round of corridor declarations, institutions will know the maximum impact from other institutions' proposed corridor change. Institutions will be allowed 3 months to prepare their proposals.

Round 2 - Circulation and Comment

Council will compile and distribute the institutional proposals, commenting on them where it sees potential inconsistencies and problems both globally and between institutions. Before Council provides comments, it will circulate all proposals to institutions. Universities will be allowed to declare conflicts which are perceived to arise from other universities' plans. Council's comments may go as far as indicating that Council will not entertain corridor shifts beyond a certain level.

This should take 1 to 2 months.

Round 3 - Downward Modification of Proposals

Institutions will be able to modify their proposals downward in light of the information provided in rounds one and two. Institutions would be required to address the inconsistencies or conflicts identified by Council. Where inter-institutional conflicts are identified and it is necessary to do so, institutions will be required to address them jointly. This should take 2 months.

Round 4 - Finalization of Corridors

Council will compile the revised institutional proposals and any remaining inconsistencies or conflicts through discussions with the institutions involved. This should take 1 to 2 months.

At the end of this process Council will provide advice to the Minister. Government will monitor enrolment in areas of identified and negotiated conflict. For accountability purposes, in areas where Council has resolved a conflict, enrolments (BIUs) should be monitored through normal auditing procedures.

7.3.2 Subsequent Individual Institutional Corridor Negotiation

On subsequent occasions when an institution wishes to have an upward corridor change which is not part of a multiple-institution corridor change, the conditions outlined in Advisory Memorandum 86-VII for corridor change apply. The corridor change must be greater than +3% of Base BIUs. Institutions will need to approach Council for the corridor change before their Moving-Average exceeds their corridor. The transitional funding arrangements will, however, be similar to those for multiple corridor negotiations. The institution will be given a new "growing" Moving-Average and incremental funding will be provided on the basis of the new Moving-Average BIUs at a rate of average Base BOI/Base BIU until it reaches the institution's new corridor mid-point. At this time the institution is afforded the protection of a new ±3% corridor.

The institution will need to provide more extensive arguments and information supporting an individual corridor shift than required for multiple institution corridor shifts. Since all upward corridor changes will need to be funded with "new" money and not be provided for in a "zero-sum game", Council will need to convince the Government of the value of the change. To do so, Council will require the following information:

(i) a five-year plan of enrolment growth by level of study and program sector;

(ii) the identification of all new programs in the next five years at all levels and program sectors;

(iii) a statement by the institution indicating how the enrolment growth planned will enhance the institution's role or mission; and

(iv) an identification of any non-operating resource requirements.

Upon receiving a proposal, Council would solicit comments from other institutions. If necessary, Council would negotiate with the institution revisions to proposals in order to alleviate any inconsistencies or conflicts.

7.4 Strategic Program Corridor Changes

As Council outlined in Advisory Memorandum 88-I, it believes that there should be a provision in the corridor mechanism to provide core funding for high-priority growth in specified programs. Council proposed that:

> ..."program corridor changes" should be allowed while an institution is within its +3% corridor if Government deems it to be a priority and is willing to provide incremental base funding to support it. In such a situation the desired BIU growth would be identified by Government and the institution's Base BIUs and Base Formula Fees associated with these students. Government would have to increase Formula Grant envelope grants with new money related to the incremental BIUs associated with the priority program multiplied by system average Base BOI per Base BIU less the incremental formula fees. The institution's Base BOI and Base grants would have to be correspondingly adjusted.[10]

This will be a critical vehicle for program growth in the future and for Government implementing strategic initiatives.

Council will undertake to identify, in consultation with institutions and other informed organizations program areas of strategic importance where extraordinary enrolment increases are required. Strategic program corridor adjustments would not normally be proposed by Council in response to individual institutional proposals. If a discipline area is deemed to be of strategic significance more than one institution would be invited to make a proposal. Proposals would need to include, at a minimum, the information usually required for program approval at the level of study of the program, a five-year plan of program enrolment growth, a statement by the institution indicating how the enrolment growth planned will enhance the institution's role or mission, an identification of any non-operating resource requirements, and additional pertinent information supporting the institution's case for extraordinary support.

Strategic program corridor changes may be of particular importance for the implementation of the French Language Services Act - Bill 8. For expansion in French language programs, formula grants funding will need to be augmented in a "permanent" manner. The Strategic Program corridor concept may facilitate these changes.

Under a Strategic Program Corridor change an institution's corridor will be increased by the level of enrolment identified by Government for incremental funding. Strategic program BIUs will be tracked and funded at slip-year levels until the levels identified for additional funding - the Strategic Program Corridor level - are reached.

7.5 Accommodation of Future Accessibility Demands

In the short-term, as institutions move into their new corridor they will receive funding for increasing enrolment. Council does not believe that accessibility provision will be a problem in this period. Indeed, it thinks that there is an incentive for institutions to maximize their enrolment in order to move their new Moving-Average to the mid-point of their new corridor as rapidly as possible. Nevertheless, it is important to have a mechanism in place prior to new corridors being established in order to fund accessibility after institutions have acquired a new corridor.

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[10] Ontario Council on University Affairs, Advisory Memorandum 88-I, Provision for General Accessibility for 1988-89 and Beyond, p. 44.

Council recommends that additional funding for enhanced accessibility be tied to system-wide increases in enrolment and not individual institution increases. Individual institution cases should be dealt with as normal corridor shifts in the manner outlined above. Concern about accessibility should be related to system accessibility. Council also feels that there should be differential funding and treatment of small increases in system enrolment, short-term significant increases in system enrolment, and longer-term sustained increases in system enrolment.

Small increases in enrolment should be accommodated within institutional corridors without additional funding. Institutions receive considerable benefit from the lower half of the corridor by being protected from any loss of grant income for enrolment declines of less than 3%. It is reasonable to expect that the upper half of the corridor should also affect institutional funding. Therefore, system-level increases in slip-year BIUs less than or equal to 3% above system Base BIUs will not receive additional grant support. Incremental funding for these students will come from tuition fees. Thus, in the short-term, universities will be responsible for the initial 3% increase in system BIUs.

Council proposes that Government's share of short-term accessibility needs should be the funding of system enrolment increases beyond the 3% level. Government should provide full average revenue or average Base BOI/Base BIU funding for all slip-year BIUs greater than 3% above system Base BIUs. Institutions' shares of these funds will be based on the number of slip-year BIUs above their corridor. This increase in funding could be less than full average revenue funding if institutions' enrolment increases which brought about the system-level increase varied substantially among institutions.

In the course of its consultations with institutions, it was suggested to Council that under this approach there is the possibility of individual institutions' income fluctuating in an unpredictable and unstable manner by system BIU level fluctuating above and below the 3% mark. Council believes that this is a valid concern and would like to introduce an element of smoothing into the proposal to dampens such perturbations. It has not come to any decision on the mechanism for smoothing enrolment fluctuation, but one possibility might be to reduce funding in the manner used for the current Accessibility Envelope: year 1 - 100% of funds provided, Year 2 - 85%; year 3 - 70%; year 4 - 40%. Council does not have a final recommendation on this matter at this time.

Council also recommends that if system level BIU growth averages for 3 years a level greater than 3% above Base BIUs, Government should fund an increased corridors of at least +3% of system Base BIUs. These corridor shifts will be funded at a rate of average Base BOI/Base BIU from the mid-point of the old corridor to the mid-point of the new corridor. New corridor levels will be negotiated in the manner outlined above for multiple institution corridor negotiations.

7.6 Declining System Enrolments

In Advisory Memorandum 86-VII, Council stated:

> Several institutions have expressed concern that a significant decline in enrolment demand could have a destabilizing impact on institutional funding under the proposed mechanism. They project that, as a result of changing demographic patterns, enrolment will decline significantly during the early to mid 1990s. The corridor mechanism provides an incentive for institutions to maintain current levels of enrolment. However, under conditions of a reduction in total system demand, institutions which can maintain enrolment may be inclined to do so in order to stay within their corridor even if they feel it is more appropriate to reduce enrolment. This would cause an even more precipitous decline in demand for other institutions. It has been suggested that **Base BIUs** and the accompanying corridors be adjusted in line with total system enrolment decline to reduce the likelihood of aggressive competition for enrolment among institutions.
>
> Council shares these concerns about the impact of a significant decline in enrolment demand on institutional behaviour and funding stability. If system-wide demand were to fall significantly below the current level, then Council would recommend whatever adjustments are necessary to institutional **Base BIU** totals and to corridors. Council believes that it would be premature to set up a detailed mechanism at this time when it is projected that these problems will not occur for several years.[11]

Council continues to support the need for adjusting corridors in the event of a substantial and persistent decline in system-level demand. In such an event, Council will make provision for reducing institutional corridors when system enrolment declines, buffering, to some degree, institutions from the loss of income associated with declining enrolment. Council believes that such buffering may vary from situation to situation depending on the location of enrolment decline and regional or institutional demand. Factors to be assessed in the decision to reduce system corridor levels and individual corridor levels would include trends in system-level applications and BIU totals as well as trends in individual institution applications and BIUs. Adjustments will occur well in advance of when system-level Moving-Average BIUs fall 3% below system-level Base BIUs. Individual institution declines in enrolment not associated with a general secular decline will be funded according to the mechanism outlined in Advisory Memorandum 86-VII.

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[11] Ontario Council on University Affairs, "Modification of the Operating Grants Formula", Advisory Memorandum 86-VII, pp. 168-9.

8.0 Conclusion

To recapitulate the main principles of Council's proposal:

1. The formula grants envelope will continue to allocate funds according to the corridor formula and distribution mechanism outlined in Advisory Memorandum 86-VII with one modification - the Moving-Average will be shortened from 7 years to 5 years.

2. Permanent increases in enrolment will be funded in a co-ordinated and planned manner through upward shifts in institutions' corridors and Base BIUs. In the current situation, where the Accessibility Envelope funding is being folded into base funding through corridor shifts for several institutions at one time, these corridor shifts need not exceed current corridor ceilings: they need not be more than 3% above the current level of Base BIUs. Any subsequent individual institutional corridor shifts must exceed the existing corridor ceiling.

3. Council recommends that $91.1 million be provided in operating grants support over 6 years to fund the estimated 19,460 flow-through BIUs generated by current levels of intake at a rate of average Base BOI per Base BIU.

4. The $84 million currently assigned to the Accessibility Envelope for general enrolment growth will be reduced over four years at a rate roughly equal to the system average full-time undergraduate retention rates.

5. Accessibility envelope funds freed-up by the phase-out of the current accessibility envelope and those funds committed by Government to recognize flow-through will be moved into base funding through upward corridor shifts. Corridor shifts will ultimately be funded from the mid-point of the old corridor to the mid-point of the new corridor (that is, from the current Base BIU level to the new corridor Base BIU level) at a rate of average Base BOI per Base BIU. Institutions receiving upward shifts in their corridors will be given a new Moving-Average, which begins with the year 1989-90 and adds a year each year until 1993-94 at which time it becomes a fully functioning five-year Moving-Average. These institutions will be funded according to this "growing" Moving-Average BIU level until the institution's new Moving-Average reaches the mid-point of its new corridor (its new Base BIU level), at which time it will be afforded the protection of a new ±3% corridor around that level.

6. The locus of planning new corridor levels and the underlying activities involved should reside in the universities, with Council's role being that of a co-ordinator of change, rather than that of a central planner, ensuring that the outcome of individual institutional choices is sensible from a university system and public policy perspective. In this role, Council will co-ordinate a set of interactive negotiations over a 7 to 10 month period in which institutions will identify desired corridor levels and planned changes in enrolment in the knowledge of other institutions' plans. Council will ensure that in aggregate these corridor shifts sum to a level where the funding provided per incremental BIU beyond old Base BIU levels is equal to average Base BOI per Base BIU.

7. If Government is willing to provide incremental funding, institutions will be able to receive a Strategic Program Corridor change, regardless of whether or not the new corridor is above the existing corridor ceiling, to provide ongoing formula grants funding for growth in specific programs of high priority for Council and Government.

8. Provision is made for the accommodation of large changes in system demand for both increases and decreases. If system-level total BIUs increase by greater than 3% above the new Base BIU level (above the system "corridor ceiling"), the BIUs above the 3% level will be funded at a rate of average Base BOI per Base BIU and allocated to those institutions whose BIU levels are above their individual corridors. If system BIUs average at a level greater than the system corridor ceiling for three years, Government will need to fund institutional corridor shifts to this level at a rate of average Base BOI per Base BIU. In the event that system-level demand declines in a persistent and substantial manner, Council will make provision for reducing institutional corridors in line with system enrolment declines, buffering institutions from the loss of income associated with declining enrolment as outlined in Advisory memorandum 86-VII.

Council's proposed revisions to the operating grants formula and Accessibility Envelope grants allocations provide Government with appropriate means of achieving the objectives outlined earlier in this memorandum. Council must reiterate, however, that this method of allocation or any other mechanism will not adequately fund increased enrolment levels which, at a minimum, will result from the flow-through of existing levels of intake without the additional funding recommended in this Advisory Memorandum. A clear choice must be made by Government: provide additional funding or accept a reduction in accessibility to Ontario universities.

Nevertheless, Council proposes an allocation mechanism which affords institutions funding stability and provides for changes in funding in a planned and co-ordinated manner. It provides Government a vehicle to initiate new program initiatives in areas of critical importance to Council and Government through Strategic Program Corridor changes. It provides a mechanism for dealing with longer-term enrolment changes, both upwards and downwards.

Finally, Council believes strongly that the proposed operating grants system provides a new opportunity for Government, institutions, both individually and collectively, and Council to plan and implement the changes in academic programs and enrolment that are deemed necessary and desirable in order to ensure that the system as a whole maintains an optimum breadth of programs and quality of education given the funds available.

Accordingly, Council *recommends to the Minister:*

OCUA 89-27
DISTRIBUTION MECHANISM WITH RESPECT TO FORMULA GRANTS, FORMULA FEES AND EXTRA-FORMULA GRANTS FOR IMPLEMENTATION FOR THE FUNDING YEAR 1990-91.

THAT in accordance with the considerations in this memorandum, appropriate modifications to the operating grants allocative formula, and the calculation of Accessibility Envelope grants be implemented for 1990-91.

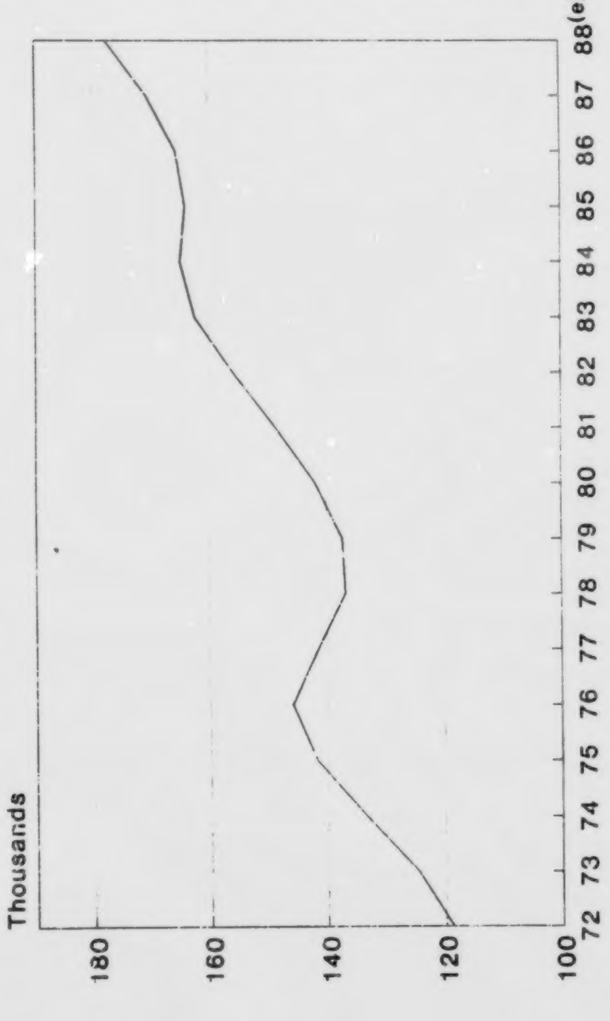
Dr. H.V. Nelles
Interim Chairman

March 17, 1989

Figure 1

Figure 1

Trend in Ontario University Full-time Undergraduate Enrolment: 1972 to 1988



Source: Statistics Canada

Table 1

Preliminary Projection of Increases in System BIUs from the Flow-through of Existing Enrolment Levels Holding Intake Constant

	Estimated BIUs	**% change over Base BIUs**	**% change over previous years**
Base BIUs	377,220		
1986-87	378,109	0.2	
1987-88	387,844	2.8	2.6
1988-89	402,176	6.6	3.7
1989-90	411,984	9.2	2.4
1990-91	418,990	11.1	1.7
1991-92	421,636	11.8	0.6
1992-93	421,636	11.8	0.0

Table 2

Projected incremental operating grant needs for Ontario universities in order to accommodate the flow-through of current levels of intake: 1990-91 to 1995-96

($ million)

	Accessibility Envelope Funding	Phase-Out of Accessibility Envelope Funding	Incremental Operating Grants	Year to Year Increase in Operating Grants
1989-90	84.0			
1990-91	65.8	18.2	46.6	
1991-92	47.6	36.4	62.1	15.5
1992-93	18.7	65.3	73.2	11.1
1993-94	0.0	84.0	81.1	7.9
1994-95	0.0	84.0	83.5	2.4
1995-96	0.0	84.0	91.0	7.5

Note: Figures given are in 1989-90 dollars.

Table 3

Estimated Reduction in first-year full-time undergraduate intake resulting from not adequate funding for flow-through enrolment growth 1990-91 to 1994-95

	Full-time Undergraduate Year 1 Enrolment	Reduction in 1988-89 Year 1 Full-time Undergraduate Enrolment	
		Number	%
1988-89	63,739		
1989-90	58,293	5,446	8.5
1990-91	58,981	4,758	7.5
1991-92	60,898	2,841	4.5
1992-93	60,872	2,867	4.5
1993-94	59,205	4,534	7.1
1994-95	59,205	4,534	7.1

Table 4

Accessibility Envelope Phase-out

	Funding Year					
	1988-89	**1989-90**	**1990-91**	**1991-92**	**1992-93**	**1993-94**
1987-88 Accessibility BIUs	100% $36M	100% $37M	70% $26M	40% $15M		
1988-89 Accessibility BIUs		100% $47M	85% $40M	70% $33M	40% $19M	
Residual Funds for Corridor Adjustments			$18M	$36M	$65M	$84M

Note: The figures are preliminary estimates.

Table 5

Growth of Corridor Shift Moving-Average

Funding Year	BIUs Counted for Corridor Shift Funding
1990-91	1989-90 BIUs - Base BIUs
1991-92	$\frac{1989\text{-}90 + 1990\text{-}91}{2} - \text{Base}$
1992-93	$\frac{1989\text{-}90 + 1990\text{-}91 + 1991\text{-}92}{3} - \text{Base}$
1993-94	$\frac{1989\text{-}90 + 1990\text{-}91 + 1991\text{-}92 + 1992\text{-}93}{4} - \text{Base}$
1994-95	$\frac{1989\text{-}90 + 1990\text{-}91 + 1991\text{-}92 + 1992\text{-}93 + 1993\text{-}94}{5} - \text{Base}$

89-III The Allocation of the Government's Operating Support for the University System in 1989-90

The Minister of Colleges and Universities informed Council on December 13, 1988 that, for 1989-90, a total of $1,670.6 million in operating grants will be made available for the university system. Of this amount, Council is to advise on the allocation of $1,552.548 million to Ontario universities. The remaining operating grants are divided in the following manner:

(i) $88.0 million is provided for accessibility envelope funding, including $4.0 million to improve access for underrepresented groups,

(ii) approximately $20.752 million for faculty renewal; and

(iii) $9.3 million is retained by the Ministry of Colleges and Universities for line-budget items including the grant-in-aid of the Bar Admission course.[1]

In addition to the operating grants announcement, the Minister announced that formula fee rates for all students will increase by 7.5% in 1989-90. This policy applies to both domestic and visa students.

In Advisory Memorandum 88-IV, Council recommended that the operating grants available to cover the costs of Council's basic funding objectives be increased by 10.1% in 1989-90. The funds made available by Government to support Council's basic funding objectives (formula and extra-formula grants) fell substantially short of the needs identified. Council notes with regret that operating grants increased by only 4.3% in 1989-90.

This Memorandum presents advice on the distribution of the $1,552.548 million available for Council's basic funding objectives. This includes recommendations on the allocation of the mission-related, institution-specific funding envelope in the distribution of differentiation grants, Northern Ontario operations grants, Northern Ontario mission grants, bilingualism grants, and extraordinary funding grants. Council also makes recommendations on the allocation of the program adjustments envelope, research overhead/infrastructure envelope, and international graduate student fee waivers. The remaining funds are allocated under the formula grants envelope.

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[1] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H.V. Nelles, December 13, 1988.

1.0 Extra-Formula Grants

1.1 Mission-Related Institution-Specific Funding Envelope

1.1.1 Differentiation Grants

Council's Advisory Memorandum 80-VI established differentiation grants as a new category of extra-formula funding intended to assist institutions which accept a clearly differentiated role, demonstrate their intention to pursue their academic strengths efficiently and effectively, and require special funding to do so. Trent University is the only institution to have received a differentiation grant.

In Advisory Memorandum 87-I, Council indicated that a new phase in the differentiation grant had been reached. The changes necessary to consolidate Trent's role as a differentiated university had been implemented. In future, the differentiation grant process for Trent must be geared towards maintaining this differentiated role.

To this end, Council initiated a thorough review to identify and estimate the incremental cost of Trent's differentiation. Council outlines the findings of the study and identifies the appropriate grant level in Advisory Memorandum 89-IV. As a result of the findings of the study, Council concludes that the current level of the differentiation grant should be increased marginally and that in the future it should be escalated annually by the percentage increase in base funding.

Accordingly, Council *recommends to the Minister:*

OCUA 89-28
DIFFERENTIATION GRANT FOR TRENT UNIVERSITY 1989-90

THAT a differentiation grant of $1,590,000 be made to Trent University in 1989-90.

1.1.2 Northern Ontario Grants

In Advisory Memorandum 88-III, Council reviewed the calculation of the Northern Ontario grants. This review focused on identifying two types of costs of Northern institutions: the costs of being institutions "in the North"; and the costs of being institutions "for the North". Council confirmed the existing funding procedures and identified two types of grants which should continue in the future: Northern Ontario operations grants and Northern Ontario mission grants.

1.1.2.1 Northern Ontario Operations Grants

The findings of Council's Northern Ontario grants review suggested that the grant levels generated by the "mini-formulae" outlined in Advisory Memorandum 75-VII closely approximated the incremental costs of institutions operating in the North. This formula was modified slightly in Advisory Memorandum 88-III to recognize the impact of corridor funding system.

Therefore, for 1989-90, the value of the Northern Ontario operations grants for Lakehead and Laurentian universities, and Laurentian's affiliated colleges, is calculated according to the "mini-formulae" outlined in Advisory Memorandum 88-III.

Accordingly, Council *recommends to the Minister:*

OCUA 89-29
NORTHERN ONTARIO OPERATIONS GRANTS 1989-90

THAT Northern Ontario operations grants in 1989-90 be made in the following amounts:

Lakehead	$3,156,000
Laurentian	3,048,000
Algoma	239,000
Laurentian (Algoma)	73,000
Nipissing	583,000
Laurentian (Nipissing)	150,000
Hearst	123,000
Laurentian (Hearst)	82,000

1.1.2.2 Northern Ontario Mission Grants

In Advisory Memorandum 88-III, Council stated:

> ...Council now believes that the special Northern Ontario grant for activities "for the North" should be divided among the institutions by using the same proportions as calculated for the Northern Ontario Operations grants. While not requiring a competitive challenge fund for distribution, these grants should not be considered block grants to be used for normal operating expenditures. The planned and actual expenditure of these grants should be monitored to ensure that these funds are used for mission-related activities.[2]

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[2] Ontario Council on University Affairs, Advisory Memorandum 88-III, Northern Ontario Grants Review, p. 23.

Council went on to recommend that the Northern Ontario mission grants be distributed to Northern institutions in the same proportions as in the Northern Ontario operation grants.

Council indicated in Advisory Memorandum 87-XIII that before increasing the size of the total grants available for Northern Ontario mission grants from the initial $3 million it was important for institutions to demonstrate the value or effectiveness of the projects undertaken in meeting these institutions' mission of being institutions "for the North". Council continues to believe it is appropriate to maintain the level of grants at the 1987-88 and 1988-89 level until an initial evaluation, as outlined in Advisory Memorandum 88-III, can be undertaken.

Accordingly, Council recommends to the Minister:

OCUA 89-30
NORTH ONTARIO MISSION GRANTS 1989-90

THAT for 1989-90, Northern Ontario Mission Grants of $3,000,000 be made in the following amounts:

Lakehead	1,270,000
Laurentian	1,227,000
Algoma	96,000
Laurentian (Algoma)	29,000
Nipissing	235,000
Laurentian (Nipissing)	60,000
Hearst	50,000
Laurentian (Hearst)	33,000

1.1.3 Bilingualism Grants

Using 1987-88 data, Council recently completed its third study of the incremental costs associated with bilingualism in Ontario universities.[3] Details of the costing method adopted by Council and the results of the study for 1987-88 for each institution are provided in Appendix A of this Memorandum. These results update and replace Council's 1981-82 bilingualism cost study results.

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[3] See Advisory Memoranda 77-VI and 83-IX for details on Council's first and second bilingualism cost studies.

The new study indicates that the total cost of bilingualism activities in 1987-88 was $21.221 million. When escalated by the percentage increase in operating grants for 1988-89 and 1989-90, the estimated 1989-90 incremental costs of bilingualism are $23.063 million.[4] These costs exceed the bilingualism grants' allocation for 1989-90 by $1.669 million.

Anticipating the approximate level of this shortfall on the basis of preliminary cost study results, Council took initial corrective measures at the time it submitted its funding level advice for 1989-90. Additional funding of $5 million for bilingualism in 1989-90 was recommended in Advisory Memorandum 88-IV as an initial step in recognition of the documented incremental costs of existing bilingualism programs.

In response to this recommendation, the Minister announced on December 13, 1988 that an additional $5.0 million is to be provided from the global allocation in 1989-90 in recognition of the incremental costs of bilingualism. As a result, the total bilingualism grants available for distribution for 1989-90 are equal to the total bilingualism grants for 1988-89 ($16.394 million) and the $5.0 million in additional funds. The $21.394 million is to be allocated according to the incidence of the 1987-88 incremental costs of bilingualism.

It is Council's initial intention that the distribution of the incremental costs of bilingualism among institutions found in 1987-88 should form the basis for bilingualism grant allocation for a four to six-year period. However, Council will consider updating the study more frequently if it is convinced by the institutions that the necessary data can be provided in a timely manner in the standardized format requested.[5] At the end of this period, bilingualism costs would again be reviewed to determine the appropriate level and distribution of grants for a subsequent period.

Accordingly, Council *recommends to the Minister:*

OCUA 89-31
BILINGUALISM GRANTS 1989-90

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[4] The percentage increases in total basic operating grants in 1988-89 and 1989-90 are respectively 4.5% and 4.0%.

[5] In the 1987-88 study, Council experimented with streamlining and standardizing the data processing. However, the streamlining was not effective in reducing the processing effort of Council. This was a result of failure to follow the general format and definitions outlined and in some instances alteration of the reporting files. In view of the resulting time-consuming clarification and modification required in the processing of data submissions, it is Council's current position that unless it can be demonstrated that these problems will not recur, annual updates are not feasible.

THAT bilingualism grants in 1989-90 be made in the following amounts:

Ottawa	$ 14,109,000
Laurentian	3,651,000
Glendon	1,833,000
St. Paul	1,465,000
Sudbury	196,000
Hearst	140,000

On January 10, 1989, the Minister forwarded the following recommendation of the Council for Franco-Ontarian Education (CEFO) to Council, to be addressed in its review of the incremental costs of bilingualism:

> That the Ministry of Colleges and Universities analyze thoroughly the funding sources for additional qualification courses for teachers and that it establish a new financing formula, adequate and permanent, to allow institutions the necessary flexibility to respond to the pressing needs of the Franco-Ontarian collectivity in this area.[6]

In reviewing this issue, Council notes that like English language teacher qualification programs, French language programs are funded through the operating grants formula. If Council's advice in Advisory Memorandum 89-II is accepted, institutions wishing to increase enrolments in French or English programs are eligible for additional funding through corridor shifts and more specifically in areas of Government priority through strategic program corridor shifts. Indeed, efforts by institutions to secure funding in this manner will be timely since under Council's advice corridor shifts will need to be negotiated within the next year, at which time additional resources will be available to fund both French and English programs.

It should be further noted that the Bilingualism envelope indirectly funds French language programs by funding the incremental costs of supporting the minority language in universities operating in two official languages. The methodology utilized in previous cost studies was revised for the 1987-88 study. Council had consulted the institutions and agreed on the methodology to be used in the study prior to receiving the reference from the Minister. Accordingly, the purpose of the bilingualism methodology has not been altered in the revision process. However, the CEFO reference remains under active consideration by the Council. It should also be noted that the whole area of French language programming is currently under review by Government.

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[6] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H.V. Nelles, January 10, 1989.

1.1.4 Extraordinary Funding Grants

In Advisory Memorandum 88-VIII, Council recommended that Algoma College receive an extraordinary funding grant to help address the current "structural deficit" of the College. The conditions for the provision and continuation of this grant are outlined in Advisory Memorandum 88-VII. However, Council must reiterate its conviction that in providing this grant, Council expects that Algoma will make the expenditure reductions necessary to live within its means, that it will not incur a current year deficit in 1989-90, and that the cumulative operating deficit must be eliminated by 1992-93.

Accordingly, Council *recommends to the Minister:*

OCUA 89-32
EXTRAORDINARY FUNDING GRANT FOR ALGOMA COLLEGE 1989-90

THAT an extraordinary funding grant of $760,000 be made to Algoma College in 1989-90.

1.2 Program Adjustments Envelope

In Advisory Memorandum 88-VII, Council provided advice on the allocation of the program adjustments envelope for projects beginning in 1988-89. The carry-forward commitments for the projects funded were significant for 1989-90. In 1988-89, the entire $7.0 million in program adjustments funds available was allocated. The carry-forward needs for these projects in 1989-90 account for $6.871 million of the $7.0 million available. Given that only $0.129 million would be available for a 1989-90 competition, Council recommends that no new program adjustments projects be initiated in 1989-90. The $6.871 million identified in Advisory Memorandum 88-VII should be allocated in the manner outlined in that advice. The remaining funds should be allocated as formula grants. Council will begin the 1990-91 competition in the near future, after it receives Government's priorities for the fund.

1.3 Research Overheads/Infrastructure Funding Envelope

In Advisory Memorandum 87-XV, Council reviewed the mechanism used to allocate the research overhead/infrastructure funding envelope. It recommended that the envelope be allocated on the basis of each institution's proportionate share of total peer-adjudicated research funding awarded to Ontario universities by the Medical Research Council, the Natural Sciences and Engineering Research Council and the Social Sciences and Humanities Research Council, calculated annually using a three-year moving-average.

For 1989-90, the total funds available for distribution ($27.170 million) are equal to the total of the previous year's grants increased by the percentage increase in total university system basic operating grants (4.0%). These grants are allocated according to each institution's share of federal granting councils' peer-adjudicated research grants for 1985-86, 1986-87 and 1987-88.

Accordingly, Council *recommends to the Minister:*

OCUA 89-33
RESEARCH OVERHEADS/INFRASTRUCTURE FUNDING GRANTS 1989-90

THAT research overheads/infra- structure funding grants be made available according to the amounts indicated in Table 2.

2.0 Other Operating Grants

2.1 International Graduate Student Differential Fee Waivers

Council outlined its advice on procedures for allocating Government's contribution to international graduate student differential fee waivers in Advisory Memorandum 88-V. This advice confirmed the existing practice where waivers were allocated among Ontario universities according to each institution's slip-year three-year average of full-time graduate student enrolment, subject to a minimum of not less than three waivers for any institution with graduate enrolment as well as the funding distribution arrangements for Government's contribution.

For 1989-90, Council recommends that Government fund 1,001 international graduate student differential fee waivers at a rate of $5,434 per waiver, a 4.0% increase over 1988-89. It also recommends that these grants be allocated according to the procedures outlined in Advisory Memorandum 88-V.

Accordingly, Council *recommends to the Minister:*

OCUA 89-34
INTERNATIONAL GRADUATE STUDENT DIFFERENTIAL FEE WAIVER SUPPORT 1989-90

THAT international graduate student differential fee waiver grants be made available according to the amounts indicated in Table 2.

3.0 Formula Grants Envelope

Of the $1,670.6 million in operating grants available for 1989-90, $191.829 million has been previously targetted for particular purposes by Government or recommended above by Council to be made available for extra-formula grants. In addition to these deductions shown in Table 1, $99,000 has been set aside by Council as a contingency provision in case any retroactive BIU adjustments are required at particular institutions.

The remaining $1,478.771 million is to be allocated according to the operating grants formula recommended in Advisory Memorandum 86-VII.[7] It should be noted that the unused portion of the contingency provision will also be distributed according to this allocation formula.

The results of the formula calculation are found under the Formula Grants column of Table 2. Subject to any necessary changes in an individual institution's BIU and formula fee count, and visa student fee redistribution, Council recommends that the formula operating grants be distributed according to the schedule found in Table 2.

Accordingly, Council *recommends to the Minister:*

OCUA 89-35
FORMULA GRANT ALLOCATION FOR 1989-90

THAT $1,478.771 million in formula grants be made available in 1989-90 to the provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College according to the operating grants formula outlined in Advisory Memorandum 86-VII resulting in the initial allocation indicated in Table 2.

Table 2 summarizes the distribution of grants based on the recommendations contained in this Memorandum. It documents, by institution, the formula and extra-formula grants recommended by Council for 1989-90, along with the recommended grant totals for 1988-89 and the percentage increases in grants between the two years.

Dr. H.V. Nelles,
Chairman

May 18, 1989

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[7] See Ontario Council on University Affairs, Advisory Memorandum 86-VII, pp. 13-27, for a description of the formula.

Table 1

Availability of Funds for Distribution as Formula Grants for 1989-90

1. Total Operating Grants Available			$ 1,670,600,000
Deduct:			
2. Line-Item Grants		9,300,000	
3. Accessibility Envelope		88,000,000	
4. Faculty Renewal Grants		20,752,000	
Sub-Total		118,052,000	
Available for Council's Allocation			1,552,548,000
5. Extra-Formula Grants			
a) Mission-Related Institution-Specific Funding			
Differentiation Grants	1,590,000		
Northern Ontario Grants			
- Operations	7,454,000		
- Mission	3,000,000		
Bilingualism Grants	21,394,000		
Extraordinary Funding Grants	760,000		
Sub-Total		34,198,000	
b) Program Adjustments Grants		6,871,000	
c) Research Overheads/Infrastructure Grants		27,170,000	
6. Other Operating Grants			
a) International Graduate Student Differential Fee Waivers		5,439,000	
7. Contingency Provision		99,000	
Sub-Total		191,829,000	
8. Available for distribution as Formula Grants			$ 1,478,771,000

TABLE 2
DISTRIBUTION OF GRANTS GENERATED BY RECOMMENDATIONS IN ADVISORY MEMORANDUM 89-III
($000)

	1989-90 RECOMMENDATIONS											
		EXTRA-FORMULA GRANTS										
		MISSION-RELATED INSTITUTION-SPECIFIC										
UNIVERSITY	FORMULA GRANTS	NORTHERN OPERATIONS GRANTS	NORTHERN MISSION GRANTS	BILINGUALISM GRANTS	DIFFERENTIATION GRANTS	EXTRA-ORDINARY GRANTS	RESEARCH OVERHEADS/ INFRA-STRUCTURE GRANTS	SPECIAL, PREVIOUSLY RECOMMENDED GRANTS & CONTINGENCY PROVISION	INTERNATIONAL GRADUATE STUDENT DIFFERENTIAL FEE WAIVERS	TOTAL GRANTS RECOMMENDED	TOTAL GRANTS RECOMMENDED FOR 1988-89	% CHANGE
BROCK	31,033						165		22	31,220	30,050	3.9
CARLETON	73,017						1,001		331	74,349	71,545	3.9
GUELPH	88,621						1,857		299	90,777	87,207	4.1
LAKEHEAD	24,162	3,156	1,270				153		38	28,779	27,604	4.3
LAURENTIAN	22,787	3,048	1,227	3,847			68		27	31,004	28,804	7.6
ALGOMA	1,660	239	96			760				2,755	1,909	44.3
LAURENTIAN (ALGOMA)	550	73	29							652	561	16.2
NIPISSING	4,180	583	235							4,998	4,747	5.3
LAURENTIAN (NIPISSING)	1,125	150	60							1,335	1,145	16.6
HEARST	403	123	50	140						716	676	5.9
LAURENTIAN (HEARST)	370	82	33							485	412	17.7
MCMASTER	96,018						3,199		353	99,570	95,663	4.1
OTTAWA	110,717			15,574			1,696		462	128,449	121,154	6.0
QUEENS	100,693						2,179		484	103,356	99,314	4.1
TORONTO	320,062						9,597		1,467	331,126	318,034	4.1
TRENT	16,340				1,590		106		16	18,052	17,369	3.9
WATERLOO	113,146						2,638		408	116,192	111,786	3.9
WESTERN	150,784						3,031		549	154,364	148,393	4.0
WILFRID LAURIER	29,936						65		98	30,099	28,969	3.9
WINDSOR	61,613						460		163	62,236	59,872	3.9
YORK	139,902			1,833			854		505	143,094	136,932	4.5
OISE	19,692						101		212	20,005	19,159	4.4
RYERSON	62,556									62,556	61,930	1.0
OCA	9,267									9,267	9,144	1.3
DOMINICAN	137								5	142	138	2.9
TOTAL	1,478,771	7,454	3,000	21,394	1,590	760	27,170	0	5,439	1,545,578	1,482,517	4.3
CONTINGENCY PROVISION								99				
PROGRAM AJUSTMENT GRANTS								6,871				

NOTES:
1. Dominican College receives 50% funding. The theology schools receiving 100% funding are included with the parent institutions. No adjustments have been made to the University of Toronto figures for St. Augustine's College becoming ineligible for funding.
2. Bilingualism grants for affiliated institutions are included with the parent institutions.
3. The "Total Grants Recommended for 1988-89" column includes those grants recommended in A.M. 87-XIII and A.M. 87-XV and international graduate student fee waivers. Therefore, the percentage change figures do not necessarily accurately reflect the actual increase in operating grants distributed. Three institutions' change in grants require explanation. Algoma's large increase reflects the fact that the special funding of $732,000 provided to Algoma in 1988-89 was allocated as a line-item grant and not as part of Council's allocation. The small inceases for Ryerson and the Ontario College of Art reflect the final phase-out of their institutional weight grants. This loss in grant income is replaced by a phased-in increase in tuition fees to the regular undergraduate arts and science fee level.
4. It should be noted that while total grants available for Council's allocation are increased by 4.3% over the previous year, formula grants are increased by 3.96% Base BOI is increased by 4.8%.

Appendix A

Methodology for the Calculation of the Incremental Costs of Bilingualism

In its study of the 1987-88 incremental costs of bilingualism, Council identified seven components of the incremental costs of bilingualism. They are as follows:

a) supplementary course offerings;

b) second language training;

c) library operations;

d) translation services;

e) publishing, printing, stationery and supplies;

f) administrative staff; and

g) computer services.

A description of the method adopted for calculating the costs included in each of these components is given below. Results of the study for each institution are shown in Table A. The methodology has been revised since the 1981-82 study, to incorporate incremental costs of bilingualism associated with computer services.

a) Supplementary Course Offerings

Supplementary course offerings are those courses, or sections of courses, whose existence is directly traceable to the bilingual nature of the institution. Actual supplementary courses/sections are those which would not be offered by a unilingual institution with the same size of student body.

These will occur in one of the following ways:

i) Parallel Supplementary Course Offerings exist when the same subject material is being taught in both English and French on the same campus in a given academic year. Language courses are excluded from the definition of parallel courses and no incremental costs are attributed to sections of parallel courses that are produced by normal sectioning practices.

ii) Non-Parallel Supplementary Course Offerings exist when different subject material is being offered in order to provide an "adequate" range of courses in either English or French. No incremental costs are attributable to: a) non-parallel courses which would be offered by a unilingual institution with the same size of student body; or b) non-parallel courses/sections where the students could not have been accommodated in other non-supplementary courses in the same discipline area at the same level (offered in the same language).

For both parallel and non-parallel supplementary courses, the following types of course sections are not included in the study: (i) multiple course sections (only one section of a minority language course is considered to have incremental costs associated with it); (ii) "directed studies" and one-student courses that are not required or compulsory courses; and (iii) translation courses. For non-parallel supplementary courses, course sections that are equal to or greater than the average section size of the institution's non-supplementary courses at the same year level are excluded from the study.

For both types of courses, the incremental faculty cost is derived by dividing the total number of supplementary courses/sections by 3.0 (the estimated average teaching load of all institutions' full-time faculty) and multiplying by the average faculty salary including fringe benefits (excluding medicine).[1] The incremental academic support staff costs are obtained by applying to the total costs of all teaching assistants, technicians and clerk-typists the following ratio: actual supplementary courses or sections over the total number of courses offered.

b) Second-Language Training

The incremental costs of second-language training are limited to the institution's expenditures on second-language training for: i) students, where that training is provided via non-credit courses; and ii) faculty and staff.

c) Library Operations

The costs of bilingualism relating to library operations have two elements: book costs and cataloguing costs.

Incremental book costs are derived by comparing the proportion of total purchasing and binding costs (including ordering and processing) of books and periodicals in each bilingual institution's minority language with the corresponding proportion at a comparable unilingual institution. When the difference between the proportions is applied to the total costs of books and periodicals purchased and bound at the bilingual institution, the incremental book costs as a result of bilingualism are calculated.

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[1] This differs from the 1981-82 cost study methodology outlined in Advisory Memorandum 83-IX, in which "average faculty salaries" are exclusive of both fringe benefits and medicine.

Incremental cataloguing costs are determined by including the costs of:

i) extra catalogue cards purchased because of bilingualism or additional costs directly incurred with computer cataloguing related to the minority language (Note: a detailed explanation and documentation of the incremental computer catalogue costs must accompany this cost item); and

ii) expenditures on the translation of library cards or their computer record equivalent.[2]

d) Translation Services

The expenditures of the institution's central translation department, expenditures on external translation services, and expenditures of academic departments on French-English and English-French translations of specified documents are deemed to be incremental costs.

e) Publishing, Printing, Stationery and Supplies

Each institution's estimate of additional expenditures on publishing, printing, stationery and supplies because of bilingualism is deemed a reasonable measure of the incremental cost.

f) Administrative Staff

The total costs deemed to be incremental are as follows:

i) the cost of extra staff required to provide bilingual services; and

ii) salary differentials for bilingualism paid to staff who must be bilingual to perform their function.

g) Computing Services

The costs deemed to be incremental in the provision of computer usage instruction and administrative support in the minority language are as follows:

i) the incremental cost of additional software required to support courses in the minority language, and

ii) the incremental cost of bilingual software to provide administrative services in both languages.

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[2] Additional costs associated with computer cataloguing were not included in the previous 1981-82 bilingualism cost study methodology outlined in Advisory Memorandum 83-IX.

Table A

Incremental Costs of Bilingualism in Designated Ontario Universities, 1987-88
($)

	Ottawa	St.Paul	Laurentian	Sudbury	Hearst	Glendon (York)
Supplementary Course Offerings	7,372,364	921,444	2,390,502	142,736	25,280	1,191,000
Second Language Training	308,000	—	19,760	—	—	69,703
Library	896,052	128,251	158,570	17,560	20,093	91,838
Translation Services	173,855	23,077	120,934	9,948	31,111	44,659
Publishing, Printing, Stationery and Supplies	723,476	24,521	277,560	7,445	18,362	53,987
Administrative Staff	4,457,134	340,428	638,662	16,607	44,204	360,600
Computer Services	64,000	15,872	15,000	—	—	6,375
Total	13,994,881	1,453,593	3,620,988	194,296	139,050	1,818,162

89-IV Trent University Differentiation Grant Review

1.0 Background

Trent University has been receiving a differentiation grant since 1981-82 when Council introduced this new category of extra-formula funding in recognition of the extraordinary costs of Trent's almost exclusive engagement in the provision of undergraduate Arts and Science education. This grant was provided annually on the condition that Trent eliminate its cumulative operating fund deficit and that it consolidate its graduate offerings, phasing out masters' degree programs in Physics, Chemistry and History. By 1986-87, Trent had met these conditions. In Advisory Memorandum 87-I, Council observed that: "In future, the differentiation grant process for Trent must be geared towards maintaining this differentiated role."[1]

As a result of uncertainty regarding the level and the continuation of the grant, Council, at Trent's request, undertook in 1987 to review the grant level, the conditions attached to it, and a process for modification in order to address the on-going basis of a differentiation grant. In 1987, Council indicated that it had "initiated in the past year a thorough review to identify and estimate the incremental cost of Trent's differentiation."[2] The current Memorandum outlines the nature of the review, the methodology and Council's recommendations.

2.0 The Review Process

From the outset of the review, Council's intention was "to identify and cost specific factors or criteria which are related to Trent's differentiated role and which result in extraordinary costs being incurred without being sufficiently met by the regular formula grants."[3] Council undertook a consultative review process with Trent to meet this objective. In July, 1987, Trent was invited to identify the relevant criteria for such a review. Trent responded in August, 1987, with a detailed and itemized classification of extraordinary costs relating to its collegial organization, recruitment, administration and physical plant characteristics, its faculty-intensive undergraduate program delivery, a part-time evening program of undergraduate studies offered in Oshawa, a low level of graduate activity without the cross-subsidization of professional programs, a limited graduate enrolment which constrains the pool of graduate student research assistants to support faculty research, and the improvement of the library to catch-up to the rest of the system.[4]

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[1] Ontario Council on University Affairs, "Advisory Memorandum 87-I", Fourteenth Annual Report: 1987-88, p. 19.

[2] Ontario Council on University Affairs, "Advisory Memorandum 87-XIII", Fourteenth Annual Report: 1987-88, p. 172.

[3] Letter from Dr. Paul Fox to Dr. John O. Stubbs, President, Trent University, July 20, 1987.

Council, in consultation with an external consultant, discussed Trent's proposals at length. On November 19, 1987, the Funding Committee, acting on behalf of Council, established a set of general principles for costing Trent's differentiated role.

> "The Committee adheres to a general philosophy of formula funding which minimizes outside intervention in the universities' allocation of their resources while treating them all similarly. However, the Committee recognizes that Trent may have inherent cost disadvantages specific to it which would justify additional grants to ensure that its students would not be disadvantaged. Cost disadvantages that result from Trent's choices, and can therefore be resolved by the University, would not be included."[5]

Council further concluded that the activities which would be eligible for differential cost must meet both of the following conditions:

(i) that the identifiable costs of differentiation must relate directly to Trent's differentiated role as a primarily undergraduate Arts and Science university; and,

(ii) that the costs identified must be beyond the university's control.

After reviewing Trent's list of extraordinary costs, Council limited the categories which would be examined for incremental costs to instructional expenses, administrative expenses, and energy expenses. The criteria and an appropriate methodology for costing the identified components of differentiation were reviewed with Trent.

3.0 The Methodology

Three considerations guided Council's selection of an appropriate methodology. First, Trent's current physical plant configuration, which consists mainly of small classrooms and meeting spaces, prevents it from increasing class sizes in order to be financially viable under formula funding. Second, Trent's small enrolment, substantially beyond the university's control because of physical plant constraints, results in higher administrative and instructional costs per student compared to other Ontario institutions not receiving mission-related institution-specific extra-formula grants. Finally, Council acknowledged that Trent's physical plant configuration may create other non-instructional extraordinary expenses.

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[4] Trent University submission "Criteria for Establishing the Extra-Ordinary Costs of Trent's Differentiated Role" to the Ontario Council on University Affairs, August 26, 1987.

[5] Letter from the Ontario Council on University Affairs to Dr. John Stubbs, Trent University, November 19, 1987.

Trent argued that its mode of instruction, its small scale and low number of graduate students forced it to incur additional instructional costs. As noted above, Council focussed on those costs deemed to be beyond Trent's control. Nevertheless, to a certain extent Trent's mode of instruction was taken into account in as much as the design of those parts of Trent's physical plant reinforced its mode of instruction. The methodology for estimating the incremental instructional expenses directly ties these costs to physical plant constraints.

Not surprisingly, it is difficult to determine, solely on an internal basis, the extent to which these expenses are wholly and necessarily related to differentiation. The review, therefore, attempted to determine the incremental instructional and administrative costs by identifying relative costs incurred by other universities. The universities chosen for comparison purposes were deemed to be at the "edge of the system". That is, they were not reflective of the system mean but were those institutions whose relevant characteristics were most similar to Trent's and yet did not receive mission-related institution-specific extra-formula grants. The incremental costs of Trent's differentiation were identified as those expenses in excess of the chosen benchmarks.

3.1 Extraordinary Instructional Costs

To identify Trent's extraordinary instructional costs related to differentiation, three steps were carried out. First, the proportion of Trent's operating expenditure on instructional expenses[6] was compared to that of other institutions not receiving mission-related institution-specific extra-formula grants. Trent's instructional expenses exceeded this by $1.542 million in 1987-88.

Through this procedure, Queen's University was chosen as the institution with the highest proportion of formula revenues allocated to instructional expenses by another Ontario university not receiving mission-related institution-specific extra-formula assistance. This equalled 43.7% of total formula revenue (formula revenue includes formula, enrolment adjustment, program adjustment, research overhead, library and faculty renewal grants and tuition fees).

Second, an adjustment was made to the incremental instructional expenses to reflect controllable costs related to the institutional choice of mode of instruction.

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[6] For purposes of this study, instructional costs are defined as including operating expenditures on the following COFO-UO (Council of Finance Officers - Universities of Ontario, Financial Report of Ontario Universities 1987-88 Volume I - Universities) objects of expense: salaries and wages for academic ranks plus other instruction and research expenses less sabbaticant salaries. Sabbaticant salaries were provided by Statistics Canada in response to a special request.

Sectioning practices were adjusted in that the average tutorial size was assumed to be increased to the lesser of course enrolment, room capacity or 15 students. When tutorial sizes were increased to the lesser of the room capacity, course enrolment or 15 students, full-time equivalent (FTE) faculty requirements were reduced by $320,000 in 1987-88.

Third, in order to be consistent with other methodologies where section costs were identified, such as with the incremental costs of bilingualism, an additional adjustment was made whereby single student sections, in courses not identified as required courses according to the university calendar, were assumed to be taught as off-load reading courses or directed-study courses and were not counted. The removal of these sections further reduced the extraordinary instructional costs by $147,000 in 1987-88.

As a result of these adjustments, the final figure identified by Council as extraordinary instructional expenses was $1.075 million.

3.2 Extraordinary Administrative Expenses

Trent argued to Council that to a certain extent, administrative expenses are "fixed" with respect to enrolment. It was argued that larger universities incur lower fixed costs per student and benefit from economies of scale, while such costs are higher per student at small universities like Trent. Council found that, in comparison to other institutions not receiving mission-related institution-specific extra-formula grants, Trent incurs a higher proportion of fixed cost on this basis. Since it is difficult to determine directly Trent's extraordinary administrative costs, these costs were determined indirectly through a multiple regression analysis.[7] The equation resulting from the regression analysis was applied to determine fixed administrative costs per Basic Income Unit (BIU). In assessing the incremental costs of administrative expense Wilfrid Laurier University was used as the benchmark. Of all other Ontario's universities not receiving mission-related institution-specific extra-formula assistance, Wilfrid Laurier's size, costs and administrative expenses per BIU were most comparable to Trent's. By this process, Trent's extraordinary administrative expenses for 1987-88 were estimated to be $277,000.

3.3 Extraordinary Energy Costs

Trent's differentiated energy costs were estimated to be $43,000. The multiple number of meters on its campuses resulted in an estimated $29,000 in higher charges for the first kilowatt hours of consumption. The lack of computerized energy controls in the downtown campus buildings increased Trent's energy costs by $14,000.

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[7] The multiple regression specified administrative costs as a function of costs that are fixed with enrolment plus a variable cost related to BIUs minus a cost reduction factor that increased with the size of enrolment.

4.0 Conclusion

As outlined in Table 1, the estimated total costs for differentiation at Trent for 1987-88 were estimated to be $1.395 million. This study, which has narrowly defined the range of eligible expenditures, thus generally confirms the appropriateness of the $1.5 million differentiation grant to Trent in 1988-89. However, Council must emphasize that the methodology used, particularly with respect to instructional and administrative differential costs, provides at best an approximation of the level of the differentiation grant required. Consequently, this study has been used solely to confirm that the level of the differentiation grant is appropriate.

Council also concludes that this methodology is not appropriate for an annual calculation of the differentiation grant level. Several factors support Council's conviction that this process should be of a confirmatory nature and not become the basis for an annual determination. First, the external elements with which comparisons are made may change in a non-uniform manner creating uncertainty. Second, Trent's physical plant is undergoing change which will alter the physical plant constraint. Furthermore, Council does not want the differentiation grant to influence institutional behaviour as to class size and administrative expenditures. Therefore, Council feels that it is most appropriate to treat the results of its cost study as roughly confirming the validity of the existing level of the differentiation grant.

In light of global funding increases for all institutions in 1989-90, Council believes that the Trent differentiation grant should be set at $1.59 million.[8] Further, Council believes that the level of the differentiation grant should be increased annually by the percentage increase in base grants and that the grant level should be reviewed in four to six years, after Trent receives and reaches a new corridor level and its new capital facilities have come on stream.

Council feels it is necessary to reiterate that the original differentiation grant conditions of fiscal responsibility and focus on undergraduate Arts and Science program delivery continue to apply.

Accordingly, Council *recommends to the Minister and Lieutenant-Governor in Council:*

OCUA 89-36
DIFFERENTIATION GRANT FOR TRENT UNIVERSITY FOR 1989-90 AND BEYOND

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[8] Ontario Council on University Affairs, Advisory Memorandum 89-III - The Allocation of the Government's Operating Support for the University System in 1989-90, May, 1989, p. 3.

THAT, the differentiation grant for Trent University be continued in 1989-90, and beyond, according to the considerations outlined in this Memorandum.

Dr. H.V. Nelles,
Chairman

June 14, 1989

Table 1

Trent Differentiation Grant Review 1987-88
($'000s)

Extaordinary Instructional Costs			1,542
	Adjustments	Tutorial Size	-320
		No Load	-147
	Subtotal After Adjustments		1,075
	Extraordinary Administrative Costs		277
	Extraordinary Energy Costs		43
Total Differentiation Costs			1,395

89-V GRADUATE PROGRAM PLANNING AND FUNDING IN THE THIRD QUINQUENNIUM 1989-90 TO 1993-94

1.0 Introduction

The quinquennial approach to graduate program planning and funding has been in place since 1979-80, following the Minister's acceptance of Advisory Memorandum 77-VII. The purpose of the quinquennial review is to examine, at five-year intervals, the process and objectives of Council's graduate program planning and funding efforts. The first graduate program planning quinquennium concluded in 1984. The second graduate planning quinquennium ended on April 30, 1989.

During the 1988 Spring Hearings, Council consulted widely with university representatives and the Council of Ontario Universities (COU) regarding the value and utility of existing objectives and criteria for graduate program planning and funding. Modifications for the third quinquennium were suggested both at the Hearings and in written submissions from institutions. Some of the suggestions made during this consultative process have been incorporated into the revised objectives and criteria which are recommended by Council in this Memorandum.

This Memorandum highlights developments which will affect future graduate program planning and funding in the Province of Ontario, sets out Council's objectives and processes for graduate planning and funding in the third quinquennium (1989-90 to 1993-94), and addresses the issue of the existing ban on doctoral program funding at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier universities.

2.0 Components of Graduate Program Planning and Funding

Graduate program planning and funding in the Province of Ontario have undergone many changes since the recommendations of The Commission to Study the Development of Graduate Programmes in Ontario Universities (1966), which triggered the development of a graduate program planning process. Since that time, graduate program planning in Ontario has evolved into a responsibility shared between the universities and Government.

The universities, through COU and its subsidiary body, the Ontario Council on Graduate Studies (OCGS), are responsible for the process of quality assessments.[1] OCGS conducts periodic appraisals of existing programs and standard appraisals of all new graduate programs. The standard appraisal process provides the assurance of quality upon which Council and its Academic Advisory Committee (AAC) depend. The conclusion of the Dupré report, An Assessment of the Council of Ontario Universities' Program Quality Appraisals Process, gives every assurance that this confidence is not misplaced.[2]

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[1] The Academic Advisory Committee of Council is charged by Council with monitoring the COU graduate program quality appraisal system from time to time.

Council's responsibilities during the second quinquennium have been focused on funding decisions related to the introduction of new graduate programs in accordance with Council's graduate program planning objectives and funding criteria[3], and the annual review of institutional five-year graduate plans.

3.0 Developments During The Second Quinquennium, 1983-84 to 1988-89

A number of developments within the second quinquennium have modified the context in which graduate program planning occurs. The most significant development is that of the corridor funding system, implemented in 1987, which decouples enrolment levels from funding entitlements inside a ± 3% corridor established for each institution. This new funding mechanism provides universities with greater flexibility to make trade-offs between competing programs within their institutions, and enables institutions to respond more quickly to societal demand for new programs since program introduction or elimination is no longer tied directly to an increase or decrease in funding. It is Council's view that the recently revised operating grants formula will increase the significance of planning for the graduate enterprise during the third quinquennium.

Although there is no longer a direct link between Council's program approval process and additional formula funding, approval for funding eligibility is required if enrolments in new programs are to be counted as eligible Basic Income Units (BIUs). Eligible BIUs form the basis upon which changes in corridor funding levels will be made and upon which the moving-average of BIUs is based.[4] Only programs with eligible BIUs will be considered for funding from other operating grant sources such as the Accessibility Envelope and the Program Adjustments Envelope.

New graduate program development occurring within the third quinquennium will provide additional funds for growth when combined with an upward corridor shift. Operating grant sources such as the Program Adjustments Envelope, when combined with the Strategic Program Corridor system envisioned by the current formula,[5] may also facilitate the expansion of opportunities for graduate study in Ontario.

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[2] In 1985, Council commissioned a review of the appraisals process. The conclusion of the three assessors commissioned indicated that the appraisal process then in place produced "reliable and credible judgements of the academic quality of existing and proposed graduate programs in Ontario". Council's acceptance of the review is recorded in Ontario Council on University Affairs, Advisory Memorandum 86-III, Thirteenth Annual Report, 1986-87, p. 81.

[3] Ontario Council on University Affairs, Advisory Memorandum 83-VIII, Tenth Annual Report 1983-84, pp. 63-74.

[4] See OCUA Advisory Memorandum 86-VII, Modification of the Operating Grants Formula, Thirteenth Annual Report, pp. 151-190, for a description of the formula.

Other developments during the second quinquennium include a gradual increase in the student demand for graduate education, the escalation of credentialism, and an increasing societal need for post-graduates.

Reflecting an increasingly knowledge-based economy, the demand for higher education in Ontario gradually increased over the second quinquennium. As Figure 1 illustrates, in 1988-89 total FTE graduate enrolment reached a high of 22,877, representing an increase of 10% over the period 1984-85 to 1988-89 and a 24% increase since 1979-80, the initial year of the first quinquennium.

Program specific enrolments grew in most instances during the second quinquennium (see Appendix A). Full-time master's program enrolments over the period 1984-85 to 1988-89 increased by 8%. Increases occurred in the fields of Health Professions and Occupations (20%), Commerce and Business (16%), and Humanities and related programs (13%). A decline in full-time master's enrolment occurred only in Physical Education / Recreation / Kinesiology programs (-15%).

Part-time masters FTE enrolment grew by 3% between 1984-85 and 1988-89 with significant increases in Forestry and Landscape Architecture (50%), Health Professions and Occupations (24%), and Agriculture and Biological Science programs (13%).

Notable increases in doctoral enrolment occurred in a number of program areas. Full-time doctoral Health-related program enrolments increased 36%, and full-time doctoral enrolment in Commerce and Business Related programs increased 25%, while doctoral enrolment in Mathematics / Physical Sciences increased by 24% between 1984-85 and 1988-89. Full-time doctoral enrolment in Education, Physical Education / Recreation / Kinesiology, Agriculture / Biological Science and Engineering and Applied Science programs increased by 21% each over the same period. No doctoral program areas experienced overall declines in enrolment during this time period.

Part-time FTE doctoral enrolment declined by 4% between 1984-85 and 1988-89. The largest decline in part-time FTE enrolments occurred in Agriculture and Biological Sciences (-26%), Mathematical and Physical Sciences (-17%), and Commerce and Business Related programs (-9%).

As illustrated in Figure 2, full-time master's FTE enrolment between 1984-85 and 1988-89 increased by 8%, while part-time FTEs grew by 3%. Full-time doctoral FTEs during the same period increased significantly by 20%, although part-time doctoral FTEs declined by 4%. Graduate enrolments, provincially and nationally, are projected to continue to increase in the future.

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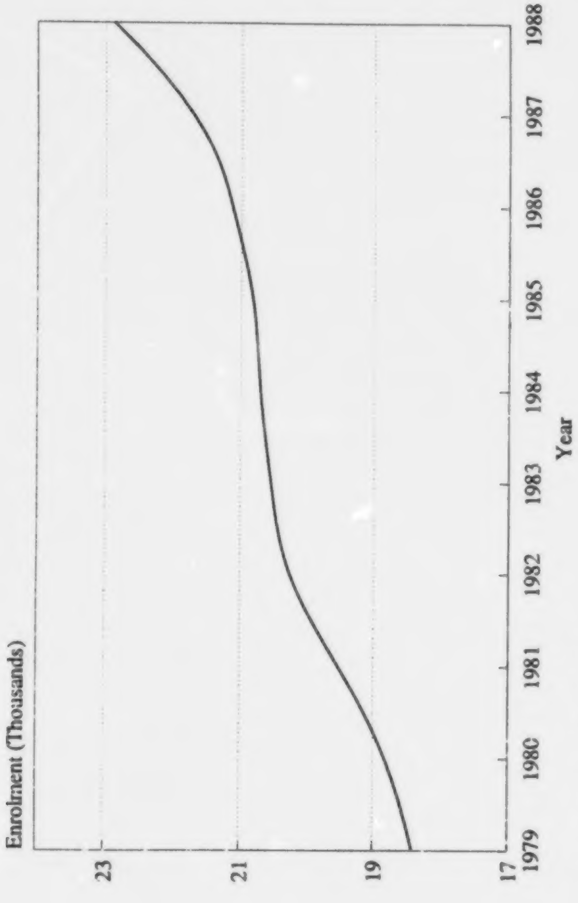
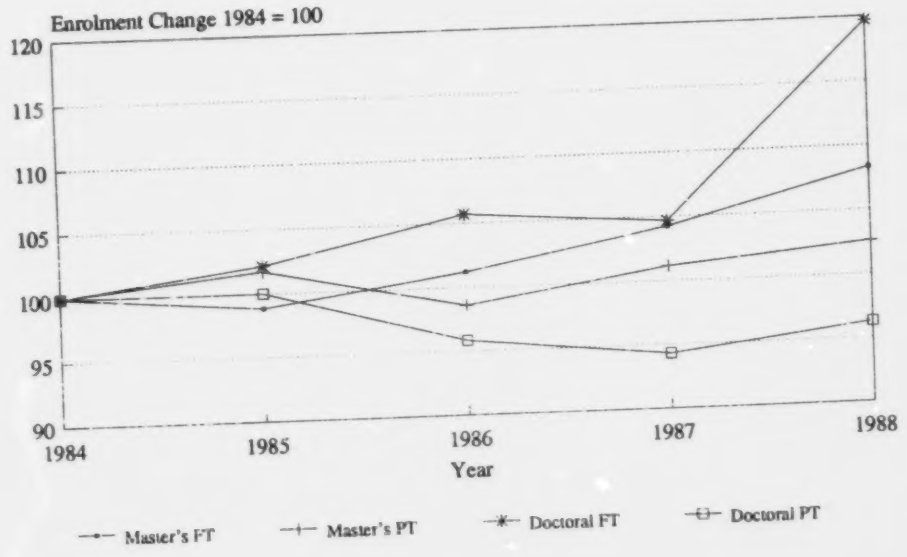
[5] See Ontario Council on University Affairs, Advisory Memorandum 89-II, "Modification of the Operating Grants Formula", 1989.

Figure 1
Total FTE Graduate Enrolment in the
the First and Second Quinquennium



Source: Min. of Colleges & Universities

Figure 2
Index of Master's and Doctoral Enrolment
During the Second Quinquennium



Source: Min. of Colleges & Universities

The possession of a university degree has become widely accepted by employers as evidence that an individual has attained a level of knowledge and expertise in a particular field. As employers place an ever greater value on the knowledge and expertise associated with higher degrees, master's and doctoral degrees assure graduates a significant competitive advantage in the marketplace. Council believes that the trend toward credentialism in all fields will continue to stimulate student demand for graduate study in Ontario universities.

Rapid technological change challenges the universities to rethink traditional modes of graduate-level academic and professional program delivery. A recent study by the Science Council of Canada indicates that the accelerating pace of technological change is placing increasing pressure on workers to update their knowledge and expertise in order to perform effectively in their jobs.[6] This pressure is gradually modifying the traditional linear model in which post-secondary education is followed by permanent employment, towards a model which includes recurrent periods of formal study throughout an individual's career.[7]

Specifically, the Science Council of Canada warns that in order to meet the educational needs of adults, the universities must broaden their clientele beyond the traditional group of young and full-time students:

> ...if they ignore the challenge, they could be supplanted by the emerging education system of corporate training centres, proprietary schools, and systems of self-directed learning. Indeed, the very existence of such a large and growing system raises questions about the universities' role in educating "highly qualified" personnel.[8]

Council anticipates that these developments will lead to a greater demand for part-time graduate instruction in the future. Additional opportunities for part-time study may be required to meet such a demand. Additional opportunities for part-time graduate study may also serve to increase the participation of women in graduate programs since it has been demonstrated that women are more likely than men to study part-time.[9] Council believes that the demand for graduate education, including the demand for part-time access, should be the subject of a detailed study in order to project both the number of places and breadth of program offerings which will be required to meet societal needs over the next quinquennium.

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[6] Science Council of Canada, Learning from Each Other : University-Industry Collaboration in the Continuing Education of Scientists and Engineers, Proceedings of a Workshop held in Toronto, November 24-25, 1986, prepared by Stephanie Amos, p. 5.

[7] Ibid.

[8] Ibid.

[9] Laura J. Selleck and Helen J. Breslauer, "The Increasingly Female Clientele for University Education in Canada", Paper presented at the annual meeting of the Canadian Society for the Study of Higher Education, Laval University, June 1989, p. 20.

Within the Ontario university system there is a general belief, which is shared by the major federal research and granting bodies, that there will be an increasing societal need for post-graduates within the third quinquennium. The National Advisory Board on Science and Technology (NABST) and the National Science and Engineering Research Council (NSERC) have projected significant short-falls in Canada's supply of post-graduates in the sciences. In a report evaluating Canadian production of the kinds and numbers of science and technology graduates required by the emerging knowledge-intensive economy in Canada, NABST states:

Graduate enrolment in the natural sciences and engineering in Canadian universities is proportionately lower than in the United States or Japan, but higher than in several other advanced nations. The number of Ph.D.s graduating in these two academic fields is also proportionately lower in Canada than in the United States. Canada not only falls short in comparisons with some of its competitors, but also many disciplines are experiencing, and will continue to experience, shortages of graduates with advanced degrees.[10]

NSERC projects shortages in virtually all natural science and engineering disciplines:

> Only under conditions of very little or no economic growth, and no further increase in the GERD [Gross Expenditures on Research and Development] investment target, would the forecast supply be sufficient to meet demand. The shortages would be relatively more serious for PhD's than for MSc's.[11]

The demand for post-graduates can be expected to increase due to recently adopted national and provincial policies promoting research and development related to economic development and international competitiveness. Provincial and federal "Centres of Excellence" programs in particular create significant demands for graduate students in the pure and applied sciences. This implies a greater need for electrical engineers, physicists, chemists, computer scientists, system engineers, cell biologists and chemical engineers with advanced training.

Areas identified by Ontario universities where the societal need to increase enrolment levels is considered to be the greatest include the applied and engineering sciences, health professions including pharmacy, most humanities, education, computer science, mathematics, and physics. Universities also indicated that a number of interdisciplinary programs, which are in existence or developing because of the increased emphasis upon collaborative research involving the private sector, need to produce more graduates.

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[10] Government of Canada, National Advisory Board on Science and Technology, University Committee, Report of the National Advisory Board on Science and Technology, February 1988, p. 12.

[11] Natural Sciences and Engineering Research Council of Canada, Research Talent in the Natural Sciences and Engineering : Supply and Demand Projections to 1990, May 1985, p. 37.

During the third quinquennium, the Ontario university system will likely experience a disproportionate number of faculty retirements, beginning most noticeably in the early to mid-1990s. There is a distinct possibility that Canadian universities may lack a sufficient number of trained graduates to replenish the faculty ranks in many fields. Should a shortage develop, universities will be unable to recruit large numbers of new faculty from outside Canada, as was done in the 1960s, since the demand for replacement faculty is expected to occur simultaneously in Canada, the United States and abroad. Competition for Canadian faculty may be fierce. Universities from other countries may begin to "raid" the faculty of Canadian universities in order to address their own faculty shortages.

Federal immigration regulations require that Canadian universities attempt to meet their personnel needs domestically and restrict the recruitment of foreign faculty to fill academic positions. However, these regulations are currently under review. Although it is unlikely that the existing policy will be entirely revised, specific fields in which faculty shortages are acute may be granted an exemption from the two-tiered approach wherein universities must first direct the advertising of vacant positions specifically toward Canadians and permanent residents.

Additional demands for doctoral program graduates are expected to develop as the total number of faculty places grows slightly to accommodate increases in undergraduate and graduate enrolment on the one hand and enhanced research activities mandated for the universities on the other. Projected retirements in the ranks of senior public servants and private sector leaders are also expected to increase the demand for masters and doctoral program graduates.

Graduate enrolments must be increased if Ontario universities are to meet the generally increasing societal demand for post-graduates and contribute to the future production of a sufficient number of indigenous replacement faculty over the next decade. Efforts to recruit doctoral students to programs of study where post-graduates and replacement faculty will be most needed over the next decade should increase.[12] In the interests of informing students about the contours of the academic market over the next decade, Council encourages the universities to continue to identify and widely advertise areas of future recruitment needs by program and field, so that domestic students and their advisors might be more likely to respond.

While Council underscores the importance of increasing the number of domestic graduate students, Council also supports the continuation of international student participation in Ontario's graduate programs. A vital postgraduate university sector depends upon intimate contact with the international world of knowledge creation. A relatively wealthy jurisdiction such as Ontario has some responsibility for assisting in graduate instruction for less developed regions in other parts of the world. Similarly, the Ontario system draws enormous benefits from the experience and different perspectives foreign students bring.

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[12] Efforts to increase the full-time participation of women in graduate studies could aid in addressing future post-graduate shortages since current full-time participation rates in Ontario for women are significantly lower than for men (Master's level: 43% women, Doctoral level: 38% women). Source: Data compiled by Mr. Brian MacMillan, using Statistics Canada data, for the Ontario Council on Graduate Studies, Conference on Women in Graduate Studies in Ontario, Millcroft Inn, May 18, 1989.

Given the importance of graduate studies in Ontario with respect to the achievement of the goals and objectives of individuals, private interests and the public sector, it is essential that the planning of the graduate enterprise for the next quinquennium ensures that the university system responds to student demand for full and part-time access to graduate programs and to future provincial and national needs for post-graduates. Council envisions the third quinquennium of graduate program planning in Ontario to be a period of planned expansion in the size and flexibility of the graduate enterprise in Ontario. Over the next five-year period Council believes that the objectives and funding criteria proposed for the third quinquennium should promote the development of a responsive, rational array of graduate programs of the highest possible quality. Expansion should occur only in those areas where high quality can be assured and maintained.

4.0 Graduate Program Planning Objectives For The Third Quinquennium

In establishing broad objectives for the graduate program area, Council wished to ensure that the objectives could be

> ...directly assimilated into the internal planning and decision-making processes of the universities, and at the same time, would strengthen the program and discipline review processes of the university collectivity.[13]

The current graduate program planning objectives, in place throughout the second quinquennium, are as follows:

1. Recognition and protection of outstanding and good quality doctoral and masters' programs.
2. Maintenance of a satisfactory level of scholarship and research activity in the university system.
3. Elimination of graduate programs of unsatisfactory quality.
4. Elimination of unjustifiable duplication among existing graduate programs.

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[13] Ontario Council on University Affairs, Advisory Memorandum 77-VII, Fourth Annual Report, 1977-78, p. 55.

5. Prevention of unjustifiable duplication by new graduate programs.

6. Recognition of high quality graduate programs in new fields of study for which there is a genuine need and student demand.

Council believes that the current objectives have been met reasonably well and have had a generally beneficial effect on the quality and selection of graduate programs offered in Ontario. Furthermore, Council believes that the current objectives are generally appropriate. No major changes to the existing objectives for the third quinquennium are proposed.

Council recognizes the enormous contribution to the quality of the graduate programs in Ontario made by the COU program appraisal process administered by the Ontario Council on Graduate Studies. The highest classification of the OCGS appraisal process denotes "good quality" programs. Within this classification are contained both the good and outstanding quality graduate programs of the Ontario university system. The appraisal process does not attempt to identify outstanding programs within the "good quality" group. However, Council notes that institutions individually are endeavouring to identify high quality programs for special resource and personnel allocations. Council applauds these efforts.[14] Council believes that the recognition and protection of high quality graduate programs should continue to be an objective of the graduate enterprise in the Province of Ontario.

Council also remains committed to the recognition of high quality graduate programs in new fields of study for which there is a genuine need and student demand and believes that this objective complements Council's recognition and protection of existing graduate programs of high quality. Council is satisfied that this objective is achieved through the application of the criteria for funding eligibility.

Council continues to support the elimination of graduate programs of unsatisfactory quality and would expect graduate program closures to occur in situations where existing programs were not sustained at a level of good quality. Council will continue to rely on the COU periodic appraisal process to identify programs which should be discontinued because of poor quality.

Council continues to support the elimination of unjustifiable duplication among existing graduate programs[15] and the prevention of unjustifiable duplication by new graduate programs. Council's position with respect to unjustifiable duplication has been reaffirmed by recent Speeches from the Throne which emphasized the determination of "areas of specialty [which] universities can master, and the avoidance of unnecessary program duplication"[16] and the Government's continuing efforts to "encourage areas of specialization and cooperation, and discourage unnecessary areas of duplication" within post-secondary education in Ontario.[17]

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[14] Council cites as particularly meritorious in this regard the University of Western Ontario's efforts to identify and reward academic excellence through the establishment of its "Quality Academic and Administrative Adjustment Fund" (QUAAF). Council notes also that Centres of Excellence funding, although limited in application to programs in the pure and applied sciences, identifies and supports outstanding elements of research and scholarship within the Ontario university system at the graduate level.

[15] It has been Council's position that "Strong, much needed new program initiatives should not be dampened by the presence, in some instances, of existing programs of dubious quality or need." Advisory Memorandum 83-VIII, Tenth Annual Report 1983-84, p. 73.

Council recognizes that in order to meet the demand for additional post-graduates over the next five years, an expansion of existing masters and doctoral programs and the development of additional programs may be required in areas of critical societal need and/or student demand. However, Council believes that unjustifiable duplication of both new and existing programs should be avoided to ensure the most efficient use of public funding in areas of critical need. These objectives can be achieved by incorporating them within the criteria applied to new graduate programs seeking funding eligibility, through negotiated corridor shifts and through autonomous institutional decisions.

It is Council's continued belief that the maintenance of a satisfactory level of scholarship and research activity in the Ontario university system is essential to the provision of high quality programs at the graduate level in the Province of Ontario.

Council, therefore, declares the following as its objectives for the third quinquennium:

1. Recognition and protection of high quality graduate programs.
2. Recognition of high quality graduate programs in new fields of study for which there is a genuine need and student demand.
3. Elimination of graduate programs of unsatisfactory quality.
4. Prevention of unjustifiable duplication by new graduate programs.
5. Elimination of unjustifiable duplication among existing graduate programs.
6. Maintenance of a satisfactory level of scholarship and research activity in the university system.

5.0 Graduate Program Funding Criteria for the Third Quinquennium

The current graduate program funding criteria, which have been in place throughout the second quinquennium, are as follows:

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[16] Government of Ontario, Speech from the Throne, Excerpts: References to university education/programs, April 22, 1986, p. 5.

[17] Government of Ontario, Speech from the Throne, April 28, 1987, p. 11.

1. That the program has passed a rigorous academic appraisal, as certified by the Council of Ontario Universities (COU), and at the time of appraisal was not found to require improvements.

2. That there is evidence of societal need and student demand for the program in Ontario and/or Canada.

3. That the proposed program does not duplicate an existing program in Ontario unless the institution proposing the new program demonstrates to Council's satisfaction that exceptional circumstances obtain such that Council should recommend the program for funding despite the duplication involved.

4. That the program is consistent with the aims, objectives and existing strengths of the institution offering the program, and is included in the institution's five-year plan.

5. That the program is deserving of funding even in a time of economic constraint.

Council believes that the introduction of the corridor funding system makes the graduate program funding approval process more significant in the short-term with respect to direct funding support. In the next few years, most institutions will negotiate an upward shift in their corridor. If approved, enrolment growth will be funded at the full average BIU value as an institution's moving-average increases to the new corridor level. In the long-term, the funding of new graduate programs will affect the future planning of the university system. One of Council's objectives in the development of the corridor funding system was to enhance funding stability to "provide the opportunity for quality considerations as well as for quantity considerations in academic decisions..."[18] within each institution. It was intended to be a mechanism which would provide flexible funding levels and would "allow for appropriate adjustments to changing levels of activity as well as allow for planning or co-ordinating initiatives."[19] Council believes that this approach will facilitate institutional specialization and strength through internal institutional decision-making, and result in the rationalization of marginal or weak programs not central to the achievement of an institution's mission.

During the 1988 Spring Hearings it was impressed upon Council that the universities conduct complex and expensive internal planning exercises which, when combined with the COU/OCGS program appraisal process, constitute a comprehensive and rigorous screening of new graduate programs before they are subjected to Council's review for funding eligibility. A number of institutions suggested that in light of these processes, which guarantee new program quality and institutional support, Council's funding approval process was superfluous. However, many other institutions supported the general process as a means of identifying and publicly supporting those programs deemed to be in the public interest. It is Council's view that the corridor funding system and the implications of the dynamic planning process inherent in it, make the graduate program funding approval process more important during the third quinquennium, than it was during the second. Institutional corridors are expected to change over time and consequently, any new program which creates eligible BIUs in the future will affect the corridor planning and negotiation process.

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[18] Ontario Council on University Affairs, Advisory Memorandum 86-V11, Thirteenth Annual Report 1986-87, p. 157.

[19] Ibid., p. 160.

In the 1988 Spring Hearings, Council noted unanimous support for retaining the requirement that new graduate programs pass a rigorous academic appraisal without requiring improvements. However, during the second quinquennium, Council noticed that some new graduate programs which passed standard appraisal had received conditional approval and that Council had not been regularly informed about the nature of these conditions. On some occasions, improvement in the quality of the program was required. Council felt that this situation should not continue. Council's confidence in the OCGS appraisal process, and in the degree to which full and accurate reporting of these results is made public, is critical to the maintenance of a shared responsibility for program quality and planning between the institutions and the Government.

COU/OCGS have subsequently revised the nature of the quality appraisal process for new graduate programs. As of January 20, 1989, new graduate programs will only receive COU/OCGS approval to commence if there are no improvements required of them.[20] Council applauds the introduction of this modification and believes that the existing criterion should be retained during the third quinquennium.

The criterion of societal need and student demand ensures that publicly supported programs are sufficient and appropriate responses to the needs and demands of students and the broader society, and that the magnitude of the need and demand warrant public financing. Council was supported by the institutions in its decision to retain the criterion requiring the provision of evidence of societal need and student demand for all new graduate programs requesting funding eligibility.

Many institutions argued against the retention of the criterion of justifiable duplication. Council believes that the notion of justifiable duplication was in fact frequently misinterpreted by the institutions as a requirement for absolute program uniqueness. In its application of the criterion of justifiable duplication, Council evaluated the degree to which the duplication of other programs having excess capacity within existing resources was justifiable or unjustifiable. As such, the justifiable duplication criterion is crucially linked to considerations of societal need and student demand. It may also be linked to an institutionally-specific academic rationale for the program. Council often permitted evidence of societal need and student demand to override evidence of program duplication.

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[20] Ontario Council on Graduate Studies OCGS Statutes, and By-Laws Governing Appraisals, Toronto: Council of Ontario Universities, 1989, p.7 (Procstandard).

In view of arguments against the retention of this criterion, Council believes that justifiable duplication should no longer be a criterion which stands alone. Council, however, is of the opinion that an evaluation of the degree of duplication involved in a new program, relative to existing programs, balanced against evidence of societal need and student demand, should become a component of Council's consideration of the need and demand for a program. Council has, therefore, incorporated the criterion of unjustifiable duplication into the criterion of societal need and student demand.

To meet the societal need and student demand criterion it is recommended that universities demonstrate to Council's satisfaction that program graduates will meet specific long-term private or public sector needs in Ontario and/or Canada, which are not currently being met by the graduates of existing programs with excess capacity. Universities must also demonstrate that the program is unique or that duplication of other programs or program fields available elsewhere is justifiable in light of the societal need for graduates or the institutionally-specific academic need for the program. The societal need for the program should be supported where applicable, by recent employment surveys, labour market demand data, and documentation from professional society organizations which demonstrate that the program meets a significant need.

Evidence of a level of student demand for the program which warrants public support must also be demonstrated. Information with respect to program application statistics, including student enquiries, total number of applicants, number of qualified applicants, and source of demand (direct flow of undergraduates, employed professionals, full-time and part-time student mix etc.) should be provided. Projected enrolment over a five-year period is required, as well as an indication of the eventual steady-state enrolment level and an indication of when the steady-state enrolment level will be reached. To satisfy the societal need and student demand criterion both aspects of the criterion must be met.

Council believes that within a corridor funding system, which encourages universities to adjust their resources and programs in relation to their mission, objectives and strengths, it is appropriate that universities continue to demonstrate to Council each program's consistency with institutional aims, objectives and existing strengths if funding eligibility is requested.

Council believes that institutions should continue to be required to include graduate programs for which funding eligibility is requested in their five-year graduate plan.

Council recommends the introduction of a new criterion which would give Council the responsibility to decide whether or not a program is an appropriate development relative to the overall expansion of the graduate enterprise within the Ontario university system. This criterion links proposed new programs to negotiated new corridors, strategic program corridors, program adjustment decisions and other program-related funding priorities.

It has been Council's experience that the existing criterion which states "that the program is deserving of funding even in a time of economic constraint" has been neither an effective nor relevant evaluative tool for Council during the second quinquennium. This criterion has, therefore, been eliminated.

Council continues to believe that, regardless of the formula financing mechanism in place, it has a crucially important responsibility for ensuring new programs eligible to receive public funding have met the Ontario standard of good quality, are meeting an identifiable and significant societal need and student demand, and are appropriate additions at a particular institution and to the existing complement of programs in the Ontario university system. Council is of the opinion that, with the aforementioned modifications to its existing criteria for funding eligibility, it can continue to fulfill this responsibility in the most efficient and effective manner. Council, therefore, recommends that the funding eligibility criteria for new graduate programs in the third quinquennium be modified in accordance with the above considerations

Accordingly, Council *recommends to the Minister:*

OCUA 89-37
FUNDING CRITERIA FOR NEW GRADUATE PROGRAMS COMMENCING MAY 1, 1989

THAT new graduate programs be considered for funding approval on the advice of Council, with such advice based on the following criteria:

1. That the program has passed a rigorous academic appraisal as certified by the Council of Ontario Universities, and at the time of appraisal was not found to require improvements.

2. That there is convincing evidence of societal need and student demand for the program in Ontario and/or Canada.

3. That the program is consistent with the aims, objectives and existing strengths of the institution offering the program and that the program is included in the institution's five-year plan.

4. That the program is deemed by Council to be an appropriate development within the Ontario university system.

6.0 Funding Eligibility Approval Process

Council's expectations of each organization involved in the program approval process are outlined below.

6.1 Council of Ontario Universities

Council will continue to expect the Council of Ontario Universities through the Ontario Council on Graduate Studies to forward both an annual report to Council on graduate program appraisal results and a set of annual graduate program macroindicators, and to co-operate with Council's Academic Advisory Committee in ensuring that the academic appraisals process continues to be rigorous and credible.

6.2 The University

Each university is responsible for submitting its successfully appraised programs directly to Council, accompanied by sufficient documentation to enable Council to determine whether the criteria of societal need and student demand have been met and to demonstrate that the program is consistent with the institution's aims, objectives and strengths. Council will continue to request that institutions submit revised five-year graduate plans on an annual basis.

6.3 Ontario Council on University Affairs

Council's Academic Advisory Committee will continue to review each graduate program proposed for funding eligibility on the basis of the approved funding criteria and submit advice thereon to Council. Council will consider the Committee's advice and make a formal recommendation to the Minister to which the Committee's advice will be appended.

In addition, Council wishes to expand the future role of AAC in two ways. First, by requesting that the Committee provide Council with advice on the annual review of five-year graduate plans and second, by requesting that the Committee provide Council with discussion papers addressing a variety of program-related issues.

Council believes that AAC's experience in the area of graduate program approvals, and familiarity with the COU macroindicator data and OCGS appraisals results gives AAC particularly relevant experience on which to provide advice to Council about the appropriateness of the five-year plans. Council will refer the five-year graduate plans to AAC on an annual basis for advice thereon. Council will review AAC's advice and subsequently provide comments to the institutions with respect to their five-year plans.

Council's responses to five-year graduate plans merely constitute an early-warning system which provide each university with Council's opinion regarding the general appropriateness of future graduate program development plans. In some cases, a review of individual five-year plans may reveal aspirations which are conflicting or duplicative in a system context. Council will attempt to provide each institution with information regarding similar program aspirations at other institutions as well as to comment on the apparent institutional appropriateness of each program. In reacting to the five-year graduate plans Council will endeavour to "aid the institutions in their planning to the extent that they could avoid committing resources to a program which had little likelihood of receiving funding approval."[21] A positive signal from Council with respect to a program included in the five-year plan is not, however, a guarantee of approval for funding eligibility.

The second new responsibility for AAC involves the production of a series of discussion papers, which may cover a variety of program-related issues including gaps in program offerings and discipline areas requiring co-ordination across the system due to faculty retirements. Council notes that the Ontario Council on Graduate Studies has recently published the first of a series of discipline reports. These reports are produced in order to communicate general information about individual disciplines to the academic community, to discuss issues arising from the appraisals process, to promote discussion of general matters of cross-disciplinary concern and to review the role of disciplines in Ontario in a national context.[22] The OCGS reports are not planning documents and do not contain specific recommendations. Council sees a logical link between the discussion documents produced by OCGS and the development of related prescriptive documents by AAC.

6.4 Schedule of Program Approvals

Council will continue to adhere to the schedule for program approvals established for the second quinquennium. Therefore, if a program is submitted to Council by August 1 in any given year, Council will make every effort to submit a recommendation to the Minister by February 1 of the following year. If the recommendation is positive and is accepted by the Minister, program enrolment eligibility for funding should commence on May 1 of the year in which the Minister receives the advice. It will remain Council's policy to submit its advice on program funding only once each year, on or before February 1.

7.0 Funding Eligibility of Doctoral Programs at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier Universities

In 1972, the Minister of Colleges and Universities approved a policy, formulated by the Committee on University Affairs/Council of Ontario Universities Joint Subcommittee on Goals and Policies for Graduate Development, which stated that "emerging" institutions (Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier) not be considered eligible for funding for doctoral programs. This policy was confirmed by the Minister's acceptance of Advisory Memorandum 78-III. In that Memorandum, Council stated that it could not

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[21] Ontario Council on University Affairs, "System Rationalization: A Responsibility and An Opportunity", Seventh Annual Report 1980-81, p. 65.

[22] Ontario Council on Graduate Studies, Modern Language Disciplines: Some Comments and Observations from Appraisals, Toronto: Council of Ontario Universities, 1988, p. 1.

> foresee a situation in which it would consider recommending funding approval for doctoral programs at these institutions, at least for the duration of the first quinquennium.[23]

Council continues to believe that the primary mission of these institutions is the establishment of a rational array of strong, high quality undergraduate program offerings. However, Council has concluded that this function is not necessarily incompatible with these universities offering a very limited number of doctoral programs, provided that the development occurs in a planned manner, in program areas where there is high quality, student demand, a societal need for graduates, and the programs are subjected to the usual appraisals for academic quality and eligibility for funding.

The issue was brought to the fore by Council's receipt of a funding request from Wilfrid Laurier University in July of 1987 for a doctoral program in Social Work. Because of the existing policy pertaining to doctoral programs at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier universities, Council could not consider the program for funding eligibility. Since the aforementioned policy has been in existence for 17 years and since the experience with graduate programs and the scope of activities of the five universities involved have developed considerably since that time, Council agreed to review the current policy. Table 1 illustrates the range of programs offered at the five institutions affected by the policy.

During the 1988 Spring Hearings, Council invited comment on this issue from the university system. Council's external consultations and internal deliberations on the issue of the ban on doctoral program funding at the five affected institutions has led Council to believe that the ban should be removed.

Council wishes to make very clear that its recommendation to remove this ban should not be construed as a signal encouraging doctoral programs at the affected institutions. Given the rigorous, new graduate program appraisal process to which all the Ontario universities have bound themselves, and the existence of Council's funding approval process to which new programs must be submitted before becoming eligible for access to public funding, Council believes that there are sufficient and substantial checks in place to ensure that any doctoral program offered would be of good quality and would be a needed and appropriate development within the Ontario university system. Furthermore, the removal of the ban would create a uniform process for the review of new graduate programs for funding eligibility.

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[23] Ontario Council on University Affairs, Advisory Memorandum 78-II, Fifth Annual Report 1978-79, p. 67.

Table 1

Graduate Degrees offered by the Universities by the Current Ban on Doctoral Funding

	Humanities	Social Science	Natural and Applied Science	Life Sciences	Interdivisional Programs
Brock	Philosophy MA	Education MEd Politics MA	Chemistry MSc Geological Science MSc Physics MSc	Biological Sciences MSc	
Lakehead	English MA History MA	Bus. Admin. Diploma Economics MA Education MEd Theory of Coaching MA/MSc Psychology MA Sociology MA	Chemistry MSc Geology MS Mathematical Sciences MA/MSc Physics MSc	Biology MSc Forestry MScF	
Laurentian	History MA	Business Admin. MBA Child & Dvpt. Studies MA	Chemistry MSc Geology MSc Applied Physics MSc	Biology MSc	
Trent	Anthropology MA		Chemistry MSc (Freshwater Science) Physics MSc (Freshwater Science) Geography MSC (Freshwater Science)	Biology MSc (Freshwater Science)	Watershed Ecology MSc Can. Heritage & Dev. Studies MA Methodology for Study of Western History and Culture MA
Wilfrid Laurier	History MA Religion & Culture MA Divinity MDiv Theology MTh Theological Stud. MTS Diploma in Theology	Diploma in Bus. Admin. Bus. Admin. MBA Geography MA Political Science MA Psychology MA Social Work MSW/DSW			

Accordingly, Council *recommends to the Minister:*

OCUA 89-38
RESCINDING THE BAN ON DOCTORAL PROGRAM FUNDING AT BROCK, LAKEHEAD, LAURENTIAN, TRENT AND WILFRID LAURIER UNIVERSITIES

THAT the existing ban on eligibility to apply for funding of doctoral programs at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier universities be rescinded.

Dr. H. V. Nelles,
Chairman

June 16, 1989

Appendix 4

FULL-TIME AND PART-TIME FTE
GRADUATE ENROLMENT BY DISCIPLINE SECTOR
1984-85 TO 1988-89

	1984-85				1985-86				1986-87				1987-88				1988-89				% CHANGE BY PROGRAM 1984-85 TO 1988-89			
	MASTERS		DOCTORATE		MASTERS		DOCTORATE		MASTERS		DOCTORATE		MASTERS		DOCTORATE		MASTERS		DOCTORATE		MASTERS		DOCTORATE	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
EDUCATION	490	872	425	109	456	911	403	114	452	917	455	96	463	919	508	96	495	953	512	105	1.0	9.3	20.5	-3.7
PHYS.ED/RECREATION/KINESIOLOG	239	23	19	2	223	25	22	1	198	29	19	2	207	25	16	1	203	23	23	2	-15.1	0.0	21.1	0.0
FINE AND APPLIED ARTS	195	33	62	1	179	36	61	1	196	26	59	1	217	29	66	1	207	33	68	1	6.2	0.0	9.7	0.0
HUMANITIES & RELATED	1534	350	1168	88	1596	343	1192	82	1616	310	1237	84	1625	340	1305	92	1732	329	1387	90	12.9	-6.0	18.8	2.3
SOCIAL SCIENCES & RELATED	2846	496	1379	112	2905	493	1429	119	2920	464	1451	114	2963	488	1516	106	3102	503	1636	109	9.0	1.4	18.6	-2.7
COMMERCE & BUSINESS RELATED	1765	742	114	11	1789	738	113	13	1892	761	126	10	2043	744	127	9	2054	758	143	10	16.4	2.2	25.4	-9.1
AGRICULTURE/BIOLOGICAL SCIENC	844	46	558	23	873	52	552	22	900	43	553	25	936	56	595	17	938	52	677	17	11.1	13.0	21.3	-26.1
ENGINEERING & APPLIED SCIENCES	1307	291	651	40	1141	306	650	36	1219	252	656	41	1268	255	692	44	1371	266	789	47	4.9	-8.6	21.2	17.5
FORESTRY & LANDSCAPE ARCHITEC	84	6	17	0	80	7	20	1	71	7	17	1	69	11	19	1	84	9	19	1	0.0	50.0	11.8	100.0
HEALTH PROFESSIONS/OCCUPATIO	845	83	372	19	869	85	438	23	875	88	459	20	920	114	79	23	1014	103	506	23	20.0	24.1	36.0	21.1
MATHEMATICS/PHYSICAL SCIENCES	1137	94	955	42	1085	95	998	41	1129	93	1047	40	1146	96	1091	39	1150	94	1182	35	1.1	0.0	23.8	-16.7
NOT APPLICABLE/NOT REPORTED	102	9	45	5	69	8	3	0	61	10	2	0	21	3	0	0	12	2	0	0				
ARTS AND SCIENCE UNKNOWN	30	3	35	5	21	3	44	4	26	5	49	4	25	3	57	3	6	2	0	0				
TOTAL FTE	11418	3048	5800	457	11286	3102	5925	457	11555	3005	6130	438	11903	3083	6071	431	12368	3127	6942	440	8.3	2.6	19.7	-3.8
TOTAL MAST & DOCT ENROLMENTS		14466		6257		14388		6382		14560		6568		14986		6502		15495		7382				
TOTAL GRADUATE ENROLMENTS				20723				20770				21128				21488				22877				
PERCENTAGE CHANGE OVER PREVIOUS YEAR					-1.2	1.8	2.2	-0.1	2.4	-3.1	3.5	-4.2	3.0	2.6	-1.0	-1.6	3.9	1.4	14.3	2.1				
TOTAL ENROLMENT PERCENTAGE CHANGE OVER 1984-85								0.2				2.0				3.7				10.4				

Source: USIS data, Ministry of Colleges and Universities.

89-VI Government Support of the University System in 1990-91

In this Memorandum, Council sets forth its advice on Government support for the Ontario university system for 1990-91. The advice consists of recommendations on both base and targeted funding. For 1990-91, Council recommends that:

- $1,758.9 million in Government grants be provided, reflecting an 8.6% increase in base operating support and an additional 2.7% increase in support of a University Educational Excellence Fund;

- $42 million be provided for major repairs, renovations, alterations and replacement projects to support the existing capital stock and $28.7 million be provided in respect of the deferred maintenance of physical plant, reflecting increases of 5% and 13% over the previous year for these two funds, respectively; and

- $1.8 million be provided in recognition of the documented shortfall in funds to support incremental costs of bilingualism programs.

1.0 Government Support

Over the past two years, the demand for places at Ontario's universities has increased dramatically. Council wishes to take this opportunity to congratulate Government for its equally dramatic and effective response. In the first instance, Government provided $84 million to accommodate enrolment growth in 1987-88 and 1988-1989. With the acceptance of Advisory Memorandum 89-II, Government commits itself to providing a further $91 million over the next six years to ensure that this expansion will constitute a permanent planned and co-ordinated addition to the existing stock of university places. In effect, Government has agreed to add the equivalent of two new universities the size of McMaster and Windsor to the system to meet the expressed needs of Ontario for university education. Council applauds these initiatives, and in particular the acceptance of Council's advice that the estimated additional 44,000 BIUs be funded at full average revenue.

The revisions to the operating grants formula and Accessibility Envelope grants allocations for 1990-91 and beyond, recommended by Council in Advisory Memorandum 89-II, will provide Government with the appropriate means of achieving many important objectives. Specifically, the revisions will:

- afford institutions funding stability and provide for changes in funding in a planned and co-ordinated manner;

- provide Government with a vehicle to initiate new program initiatives in areas of critical importance to Council and Government through Strategic Program Corridor changes;

- provide a mechanism for dealing with longer-term enrolment changes, both upwards and downwards; and

- address Government's desire to enhance accessibility to university education in a period of fiscal constraint and transfer in an equitable, co-ordinated and planned manner short-term Accessibility Envelope funding to longer-term core funding.[1]

Government's acceptance of Council's recommendations provided in Advisory Memorandum 89-II, underscores and reaffirms the commitment to accessibility and excellence of the Government of Ontario. By accepting Council's advice, Government will promote a co-ordinated and planned approach to future enrolment growth and will take into account the flow-through of students from existing levels of intake. This new approach to funding will ensure that enrolment growth will not be accommodated at the expense of further quality erosion.

Council acknowledges with gratitude that incremental growth in the system has been effectively addressed and adequately funded by Government. The base upon which this growth must be built has not, however, been satisfactorily maintained and it is to this issue that Council turns its attention with this advice. In Advisory Memorandum 89-II and during Council's presentation to the Minister and her officials, it was stressed that important funding issues beyond growth and accessibility needed urgent attention. In particular Council noted:

> It must be understood that this (formula revision) does not address the larger issue of restoring adequate base funding to address the long-term needs of Ontario's universities, but is an essential part of the regularization of university funding to allow universities to plan for the 1990s.[2]

In this Memorandum, Council identifies some of these important remaining issues relating to base operating support for the university sector and sets forth its recommendations on the operating support requirements of Ontario's university system in 1990-91.

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[1] Ontario Council on University Affairs, Advisory Memorandum 89-II, pp. 27, 57.

[2] Ibid, p. 15.

For 1989-90, Government increased total university operating support to Ontario universities by 7.9% over the total allocation for 1988-89.[3] These provisions include an increase in base operating grants of approximately 4% over the previous year - an increase which falls short both of inflationary projections and the 10.1% increase in base operating grants recommended by Council. The remaining 3.9% represents supplementary funding enhancements for 1989-90, to be provided through targeted funds such as the Accessibility Envelope and other special purpose funds. These funds reflect special needs and expenditures and are not intended to support the basic operating needs of universities.

While acknowledging these enrichments as important contributions to university funding, Council is concerned that the basic operating support extended to the institutions continues to fall short of the level required to meet Council's existing basic operating objectives for the university system. Notwithstanding improvements in operating support in recent years, Council notes that the cumulative gap between funding requirements and the level of support provided by Government has grown by an average of $28.8 million per year. Since 1986-87, the gap in funding has risen by $36.0 million annually.

Substantive evidence put forward in the 1989 Spring Hearings suggests that years of fiscal constraint, coupled with recent enrolment demand pressures, have had an impact on the quality of instruction provided in Ontario universities, particularly at the undergraduate level. Without adequate base operating support, evidence of a quality/quantity trade-off will become increasingly visible as the system continues to stretch limited operating resources to meet the escalating demand for university education.

Indeed, the extent to which quality has deteriorated has led many institutions to share the opinions expressed by McMaster University:

> If the resources are limited however, we urge that it is preferable to concentrate them on providing a good educational experience to those most capable of benefitting rather than providing an inadequate experience to all.[4]

Attaining Government's stated goals of accessibility and quality will require additional revenues. Should Government grants not be forthcoming at a level consistent with the stated demands on the university system, it will be necessary to explore other sources of revenue, namely fees.

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[3] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H. V. Nelles, December 13, 1988; Letter from Dr. Thomas A. Brzustowski, Deputy Minister of Colleges and Universities, to Dr. H. V. Nelles, June 30, 1989.

[4] McMaster University, Brief to the Ontario Council on University Affairs, May 1989, p. 6.

Council is prepared to give serious consideration to tuition fee increases above the levels recommended in this Memorandum as a means of supplementing existing revenues. Confronted with inadequate Government funding and increasingly alarming signs of deterioration in quality, universities have registered significant support for increased tuition fees which, as a proportion of total operating income, have declined markedly in the last thirty years. Council is convinced that there will be a prominent role for universities in developing the Province's broader economic and social goals for the 1990s. However, in an environment of insufficient funding, increasing costs and escalating student demand, universities will be poorly positioned to meet new challenges emerging over the course of the next decade. Council notes further that the ability to respond to these future challenges will be significantly impaired by anticipated difficulties in recruiting highly-qualified faculty to replace large numbers of retiring academics. Indeed, the age profile of the university professoriate is such that as much as one-third of existing faculty may need to be replaced over the next ten years.

At present levels of enrolment, Canadian graduate schools will not be able to meet the projected need for personnel with advanced degrees. A shortage of young academics in the international labour market will exacerbate difficulties of finding new teaching staff to replace existing faculty in Ontario. The uneven age distribution of faculty, which will give rise to large-scale retirements commencing in the 1990s, is a problem common to universities in most western industrialized countries. The Council of Ontario Universities (COU) notes that:

> The changing nature of the international market for academics is also beginning to exert pressure as universities in other jurisdictions increase efforts to recruit the best academic talent. These pressures can be expected to grow.[5]

As the recruitment market tightens, it is likely that the Ontario university system will experience a bidding war with universities in other jurisdictions, particularly in the United States and in the other Canadian provinces, as universities compete for top young scholars and seek to retain existing faculty.

Ontario may become a recruiting ground for other jurisdictions. Ontario's universities must not be put at a severe disadvantage in competing for high calibre faculty. Universities in other jurisdictions, supported by higher levels of government resources, will be better placed to attract faculty at competitive salaries. This is reinforced by measures of interprovincial support, which indicate that Ontario's resources have lagged below the average for Canada both in terms of "operating grants per full-time equivalent student" and in "support relative to growth in Gross

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[5] Council of Ontario Universities, Brief to the Ontario Council on University Affairs, April 1989, p.3.

Domestic Product (GDP)".[6] Also of great concern, is the fact that many jurisdictions in the United States, through more generous budgetary appropriations, have afforded a higher priority to universities.

Should conditions in Canadian universities deteriorate further, institutions might well become vulnerable to similar U.S. recruiting practices as experienced in the United Kingdom market, where deteriorating conditions in the British university system have facilitated aggressive recruiting by American universities. With insufficient resources available to compete for academics, the Province's universities may be forced to respond to the impending large-scale retirements not through the recruitment of highly qualified, committed academics, but through further undesirable increases in student/faculty ratios.

It is also noteworthy that Canada's expenditures in higher education on research and development, as a proportion of GDP, do not compare favourably to those of its counterparts in the United States. Council wishes to impress upon Government that improved funding of university-based research is critical if universities in Ontario are to attract and retain faculty.

Finally, a lack of competitiveness with the private sector in terms of both faculty remuneration and research support will make it increasingly difficult for universities to attract and retain its more established faculty. A recent Pennsylvania State University study indicates:

> In what is basically a post-1950's phenomenon, a growing proportion of doctoral recipients is being attracted to employment outside of academe; over 40% of holders of doctorates today are working in business, industry and government. With career alternatives, many of the brightest doctoral graduates are lost to higher education, and each year significant numbers of current faculty leave academe.[7]

To the extent that Government's goals rely on a strong human resource base, Council urges Government to adopt a longer-term perspective for universities, understanding that while quality erosion is slow, and Ontario's relative lack of competitiveness is not immediately apparent, inadequate levels of Government support will take their toll on the university system as we enter the 1990s. The cumulative impacts of insufficient base funding, inadequate research overheads and gradual, yet significant, quality deterioration will have far-reaching consequences extending beyond the present day quality of a student's education. These factors will bring into question the ability of the Ontario university system to cope and respond effectively to future demands.

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6. Council of Ontario Universities, The Financial Position of Universities in Ontario: 1988, p. 3.

7. University of Toronto, Brief to the Ontario Council on University Affairs, 1988-89, p. 29.

Council commends Government's acceptance of the operating grants formula revision which will ensure orderly and coordinated planning for incremental enrolment growth. Council urges that Government, by addressing the recommendations contained within, demonstrate a commitment to restoring adequate base funding, to ensure educational excellence and quality academic programming in Ontario's universities.

2.0 Calculation of Funding Requirements for 1990-91

In the following sections, Council outlines its estimates of the requirements for 1990-91. The calculations include Council's estimates of the funds necessary for the maintenance of operating support (Section 2.1), a university educational excellence fund (Section 2.2), cyclical renewal of the existing physical plant (Section 2.3), deferred maintenance of physical plant (Section 2.4), and the incremental costs associated with bilingualism programs (Section 2.5).

2.1 Maintenance of Operating Support

Council's calculation of the appropriate level of operating support required for 1990-91 follows the methodology applied in previous years with one significant exception. The moving average of the funding shortfall of the previous three years has been separated out of the calculation of basic funding objectives. In its place a special targetted fund has been recommended to address inadequacies in base funding and to finance measurable enhancement of the quality of education. The removal of the objective "to limit erosion of base funding" does not diminish Council's concerns in this area. Indeed, by making this item a separate targetted fund to directly address those factors where quality has been significantly eroded, Council is placing greater emphasis on this issue.

As a result of concerns raised during the 1989 Spring Hearings over the deterioration of instructional quality in the universities, Council believes it is imperative to identify and address this deterioration in a substantive manner. For 1990-91, it is recommended that the erosion in base funding be removed from the basic funding objectives, and be addressed in the specific context of quality deterioration, in a separate recommendation outlined in Section 2.2.

Consistent with the approach adopted in previous years, the funding of enrolment increases through the Accessibility Envelope makes it unnecessary to recommend adjustments to operating support based on enrolment shifts. For 1990-91 and beyond, Government has approved Council's recommendation for a new approach to allocating operating grants which takes into account recent enrolment growth.[8] Shifts in enrolment are not, therefore, considered in the calculation of operating support requirements for 1990-91.

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[8] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H. V. Nelles, June 15, 1989.

2.1.1 Basic Funding Objectives for 1990-91

For 1989-90, Council's basic funding objectives were: to limit erosion of base funding; to offset inflationary trends; and to maintain levels of service.

For 1990-91, Council modifies these basic funding objectives. "Limiting the erosion of base funding" is removed from the basic objectives and addressed separately in Section 2.2. Therefore, the basic funding objectives for 1990-91 are:

1) to offset inflationary trends; and

2) to maintain levels of service dependent upon basic operating funding.

2.1.2 Cost of Basic Funding Objectives for 1990-91

The methodology employed in costing Council's basic funding objectives for 1990-91 are outlined below. The results of the calculation are documented in Table 1.

2.1.2.1 The 1989-90 Base
(Column 1, Table 1)

Council's estimate of the basic funding requirements for the university system for 1990-91 is calculated by adjusting the universities' estimated expenditures in 1989-90 by Council's estimate of the costs of maintaining the existing level of service.

These calculations are based on the assumption that expenditures in 1989-90 will be equal to estimated revenues. The details of this calculation, including the grant categories covered in basic funding, are found in Appendix B.

Council estimates that the 1989-90 base of operating revenues and expenditures of all institutions (the fifteen provincially-assisted universities, the affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College) will be $2,078.2 million. The 1989-90 base expenditures are apportioned according to their corresponding shares in the universities' budgets; 79.9% for salaries and fringe benefits and 20.1% for non-salary items.

2.1.2.2 Increases in Costs due to Inflation
(Column 2, Table 1)

Council has reviewed forecasts of the increase in the Consumer Price Index (CPI) for 1990-91 provided by several reliable sources. These projections range from 4.8% to 5.8%. Council has chosen a mid-point factor of 5.3% as its estimate of the increase in CPI. Using this figure as its salary inflation factor, Council estimates inflation-related costs of salaries and benefits to be $88.0 million.

Table 1

The Cost of Basic Funding Objectives for 1990-91
($ Million)

	1989-90 Base	Infla-tionary Trend	Service Level Costs	Cost of Basic Ob-jectives
Salaries and Fringe Benefits	1,660.5	88.0	41.2	1,789.7
Non-Salary	417.7	21.7	24.4	463.8
Total	2,078.2	109.7	65.6	2,253.5

Notes:

1. Factors for each column of the table are as follows:

	Salaries and Fringe Benefits	Non-Salary
Column 2:	5.3%	5.2%
Column 3:	$21.0 million (1.2%) + $15.8 million + $ 4.4 million	$24.4 million

2. The above factors are applied to the cumulative total of the previous columns.

3. A detailed account of the calculation of each of the above factors is provided in the narrative of Section 2.1.2.

In the past five years, the annual increase in the Ontario University Non-Salary Price Index (OUNSPI) averaged 1.4% lower than the annual increase in CPI. The non-salary inflation factor used by Council for 1990-91 is derived by decreasing the projected 5.3% increase in CPI by the average differential between the growth in OUNSPI and CPI for this period. This yields a value of 5.2%, resulting in an estimated $21.7 million in non-salary inflation costs.

2.1.2.3 Increase in Cost of Maintaining Existing Service Levels (Column 3, Table 1)

Council continues to identify and make provision for the costs of maintaining existing levels of service which are not related to inflation. For 1990-91, provision is made for both salary-related and non-salary service level costs.

a) Salary-related Service Level Costs

Council's 1990-91 funding advice includes a provision for meeting the salary-related costs of maintaining levels of service as measured by the net cost of progress-through-the-ranks (PTR) for faculty and non-academic staff and costs related to Government legislation.

i) Progress-Through-The-Ranks

As discussed in Section 1.0, global competition is expected to bid up entry-level faculty salaries, particularly in the early to mid-1990s, as Ontario universities compete not only with other institutions but also with private and public sector employers for talented young scholars. Competition for faculty will be most pronounced in recruitment markets for several high demand disciplines, where significant premiums will be required to attract top quality academics. Higher faculty replacement costs, driven by the emergence of a seller's market, will constitute the key source of the salary-related costs of maintaining existing service levels over the course of the next decade.

While rising faculty replacement costs are expected to assume a more prominent position in university operating budgets in future, Council anticipates that the traditional emphasis of salary-related service level costs, progress-through-the-ranks, will decline in importance with the aging of the professoriate.

For several years, net costs of PTR have arisen due to the uneven age distribution of faculty and staff complements. The number of people retiring at higher salaries and being replaced by younger people at lower salaries, has been insufficient to provide the total funds required for the normal progress-through-the-ranks of continuing faculty and staff. However, as large-scale retirements begin in the early 1990s, the net costs of PTR are projected to diminish.

With faculty retirements not scheduled to peak for another few years, costs associated with PTR in 1990-91 will not be fully recovered by universities through retiring faculty and staff. The faculty flow model developed by COU predicts that for the existing age distribution of faculty, the net costs of providing for PTR in 1990-91 will be 1.2% of salaries and benefits. Council continues to use this estimate of net PTR costs also as a proxy for the net costs of providing for career progress for non-academic staff, since data on costs of career progress for non-academic staff are not sufficiently reliable to furnish an acceptable estimate of net PTR costs for this group. Therefore, the net cost of PTR for faculty and non-academic staff is estimated to be 1.2% of total salaries and benefits. The resulting $21.0 million in net PTR costs are included in Council's provisions for service level costs for 1990-91.

II) Costs Related to Government Legislation

Council notes with concern that the difficult financial position of the universities, following years of underfunding, will be compounded by additional costs associated with specific Government initiatives. Pay Equity legislation, increases in Unemployment Insurance premiums and the recently announced Employer Health Levy will increase significantly the financial burdens of the university system in Ontario. While recognizing the role of such legislation in attaining important social goals, Council emphasizes that unlike other employers who have the capacity to adjust revenues to cover costs, university revenues are regulated and as such lack the flexibility to absorb these Government-initiated costs.

As a public sector employer, universities must begin to implement Pay Equity wage adjustments starting on January 1, 1990. Under Pay Equity legislation, universities are required to devote a minimum of 1% of the previous year's payroll to pay equity adjustments.

While a detailed assessment of the impacts of this legislation on the universities for 1990-91 is not possible at this time, Council continues to estimate the costs of Pay Equity as 1% of the 1989-90 payroll. Based on this calculation, Council estimates that a minimum of $15.8 million in costs will be incurred by the universities in compliance with this initiative. This amount is included in the provision for salary-related costs of maintaining existing service levels in 1990-91. Council cautions that this is a modest estimate, reflecting only the minimum costs payable by the universities. It is possible that wage adjustments in excess of the 1% of payroll may be required in correcting wage differentials.

In the April, 1989 Federal Budget, the Minister of Finance announced that Unemployment Insurance (UI) premiums paid by employers will be increased in proportion to employee contributions, which are to be raised from $1.95 to $2.25 per $100 of insurable earnings for 1990 to 1992. COU has estimated that this proposed increase in employer benefit contributions will add an additional $5.4 million to universities' employer benefit contributions[9], $4.4 million of which will be reflected in the operating costs of universities. Council includes the $4.4 million in its provision for maintaining levels of service for 1990-91.

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[9] Council of Ontario Universities, Some Comments on the Financial Impact of the Employer Health Levy on the Universities, 1989, p. 5.

On May 17, 1989 the Treasurer of Ontario announced that effective January 1, 1990, OHIP premiums will be eliminated and replaced with a new Employer Health Levy. The Levy will take the form of a payroll tax and will be applied on the aggregate amount of an employer's payroll, including wages, salaries and other remuneration paid to employees during the year.

While intended to be revenue neutral, the Employer Health Levy will impose disproportionately large costs on universities. COU notes that while individual salaries are not high relatively speaking, universities hire large numbers of professionals and consequently pay higher average salaries across the system as a whole.[10] This contrasts with other employers whose payrolls are characterized by "salary pyramids" of a broader cross-section of salaries, which are more reflective of the average industrial wage for the province. It is also noteworthy that universities have traditionally covered a smaller portion of OHIP costs than have other employers.

While estimated costs vary significantly by institution, annualized net costs of the Employer Health Levy to the university system are projected to be $24.3 million, of which $20.1 million are expected to be borne by operating budgets.[11] Should opportunities exist for institutions to preserve traditional employer/employee contribution ratios by shifting a portion of these additional costs onto employees in future salary negotiations, Council estimates that institutions would still be required to bear considerable annual net costs of approximately $16.2 million.

Council urges the Government of Ontario to recognize the very substantial impact of the payroll tax on the universities which are not financially positioned to absorb these additional costs or recover them in the form of higher prices. Council applauds the Treasurer's commitment to provide $6.1 million of transitional assistance in respect of extra expenses incurred through the payroll tax in the first three months of 1990.[12] Council notes with favour the Treasurer's statements in the Ontario Legislature indicating that these costs will be taken into consideration in the allocation of support in the Fall of 1989.[13] It is for this reason that the net costs of the Employer Health Levy have not been included as a salary-related service level cost in this Memorandum. However, should funds of the magnitude identified above not be provided above and beyond normal base needs, Council believes that additional funds must be provided in respect of the associated costs for 1990-91 and beyond.

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[10] Ibid., p. 2.

[11] Ibid., p. 2.

[12] The Honourable Robert Nixon, Treasurer of Ontario, Statement to the Legislature, June 15, 1989.

[13] The Honourable Robert Nixon, Treasurer of Ontario, Ontario Legislature - Instant Hansard, May 23, 1989.

b) Non-Salary Level Costs

In Advisory Memorandum 88-IV, Council valued the existing stock of equipment and furniture at $1,280.8 million for 1989-90. When revised by the most recent percentage change in OUNSPI for these components the value becomes $1,253.3 million.

Based on a 12-year replacement cycle, it is estimated that expenditures of $104.4 million will be required in 1990-91 to meet cyclical renewal needs. Expenditure information provided by the institutions for 1988-89 and budgeted for 1989-90 suggests that institutions can be expected to spend approximately $80 million from traditional sources of income in 1990-91 on equipment and furniture purchases and rentals. Council estimates that an additional $24.4 million must be made available in 1990-91 for the cyclical replacement of equipment and furniture.

2.1.2.4 Total Cost of Basic Funding Objectives (Column 4, Table 1)

The total cost of basic funding objectives in Column 4 of Table 1 is the sum of the first three columns. Council's estimate of the total cost of basic funding objectives for 1990-91 is $2,253.5 million, representing an 8.4% increase over the 1989-90 estimated expenditure base.

2.1.3 Estimated Government Grants Required to Meet the Basic Funding Objectives

As depicted in Table 2, Council estimates that income accruing to the university system in 1990-91, in addition to Government grants, will be:

i) from other sources, $100.4 million, which is the same as the amount projected for 1989-90;

ii) from fees other than tuition fees, $29.6 million, which is the 1989-90 projection adjusted for a projected 1.7% increase in enrolment in 1990-91; and

iii) from formula tuition fees, $375.4 million at 1989-90 fee rates and including a projected 1.7% increase in enrolment in 1990-91.

Consistent with Council's advice on formula fee rates in Advisory Memorandum 79-IV, formula fee rates are to be increased by the same percentage as operating grants. Therefore, formula fee rates and Government grants should be increased by

8.6%[14], as noted in Table 2, line 8. Council believes this to be a reasonable increase in formula fee rates if Council's basic funding objectives are to be met.

Council estimates that of the total $2,253.5 million required, $1,715.8 million must be made available as Government operating grants to meet the cost of Council's basic funding objectives in 1990-91 (Table 2).

Accordingly, Council *recommends to the Minister:*

OCUA 89-39
GOVERNMENT OPERATING GRANTS FOR 1990-91 TO MEET THE COST OF COUNCIL'S BASIC OBJECTIVES IN FUNDING PROVINCIALLY-ASSISTED UNIVERSITIES AND THEIR AFFILIATED COLLEGES, RYERSON POLYTECHNICAL INSTITUTE, THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION, THE ONTARIO COLLEGE OF ART, AND DOMINICAN COLLEGE

THAT $1,715.8 million in basic operating grants be made available in 1990-91 to the provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College.

Accordingly, Council *recommends to the Minister:*

OCUA 89-40
FORMULA FEE RATES FOR 1990-91 TO MEET THE COST OF COUNCIL'S BASIC OBJECTIVES

THAT formula fee rates for 1990-91 be increased by the same percentage as operating grants, namely 8.6%, to provide $407.7 million in formula fee revenue to the provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College, and that this increase in formula fee rates be fully reflected in the Ontario Student Assistance Program.

2.2 University Educational Excellence Fund

Council's concerns over the cumulative impacts of shortfalls in operating support were reaffirmed during the 1989 Spring Hearings, at which time evidence brought forward by institutions delineated a clear relationship between years of fiscal

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[14] This number differs slightly from the 8.4% increase indicated in Section 2.1.2.4, due to the fact that income from other sources and other fees are not escalated for inflation.

Table 2

Cost to Government of Meeting Council's Basic Funding Objectives for 1990-91: Provincially-Assisted Universities, Affiliated Colleges, Ryerson, OISE, OCA, and Dominican College

($ million)

1.	Cost of Basic Funding Objectives		2,253.5
2.	Other Non-Fee Revenue		(100.4)
3.	Other Fee Revenue		(29.6)
4.	Total Formula Fees and Government Operating Grants required to meet Council's Basic Funding Objectives		2,123.5
5.	Formula Fee Revenue at 1989-90 rates and the predicted 1990-91 level of enrolment funded by base operating grants		375.4
6.	Estimated 1989-90 Operating Grants		1,579.6
7.	Estimated 1989-90 Operating Grants and enrolment-adjusted Formula Fee Revenue (line 5 + line 6)		1,955.0
8.	Percentage increase in Operating Grant and Formula Fee Revenue $\frac{\text{(line 4 - line 7)}}{\text{line 7}}$ X 100	8.6%	
9.	Additional Formula Fee Revenue generated by an 8.6% increase in formula fee rates		32.3
10.	Total formula Fee Revenue (line 5 + line 9)		407.7
11.	Cost to Government of Basic Funding Objectives (line 6 increased by 8.6%)		1,715.8

restraint and impacts on quality of instruction in Ontario universities, particularly at the undergraduate level.

During the Hearings, many institutions registered concerns over increases in student/faculty ratios, severe overcrowding, an over-reliance on teaching assistants and part-time faculty and reduced availability of key courses. In addition, universities noted obsolescent equipment and documented deterioration of library and laboratory facilities. Some of the more serious examples of deterioration in quality of instruction in the Arts and Social Sciences, noted by one institution and illustrative of similar problems throughout the system included: excessive class sizes, which preclude questions and discussion in most first and second year courses; the complete elimination of essay requirements in all first and second year Social Sciences; and the elimination of essay-type examinations in many first and second year courses.[15] Different institutions have made different compromises, but all have had to trade off quality against other considerations, under pressure on the one hand from base costs rising more rapidly than base income and rising enrolments.

While Council acknowledges the difficulties of quantifying quality deterioration, it is convinced that these trends violate the basic principles of quality university education. Council notes further that the process of quality erosion has been exacerbated by inadequate increases in base funding which have failed to keep pace with marked enrolment growth.

In previous years, Council has acknowledged prior inadequacies in base support by incorporating an adjustment factor into the cost of basic funding objectives, to preclude further erosion of the funding base which is used in calculating the cost of basic funding objectives.[16] However, in view of the urgency for quality restoration expressed in the Spring Hearings, Council is convinced that the redress of the accumulated shortfall for 1990-91 should be identified separately and channelled specifically towards improving educational quality.

In the funding advice for 1990-91 Council, therefore, identifies instructional quality restoration as a fundamental objective in the operation of universities and recommends that the impact of consecutive shortfalls in operating support be addressed annually through a University Educational Excellence Fund, dedicated to enhancing the calibre of instruction in the Province's universities. The Fund should be targeted at instructional improvements such as increasing full-time faculty complements and reducing section sizes, thereby enabling a reduction in student/faculty ratios. In addition, funds should be channelled to new innovations in teaching methods and state-of-the-art teaching devices.

Council believes that the establishment of a University Educational Excellence Fund would effectively address concerns of instructional quality in the Province's universities. Council supports the position of many institutions that academic integrity should not be compromised to accommodate Government's policy of broad accessibility. In this regard, the University of Western Ontario contends:

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[15] University of Windsor, Submission to the Ontario Council on University Affairs, May 19, 1989, p. 2.

[16] Ontario Council on University Affairs, Advisory Memorandum 85-IV, p. 49.

> ...accessibility should be considered a qualitative as well as a quantitative issue, and numbers of students should not be the sole measure of public service performed by universities... While the University of Western Ontario is fully supportive of the principle of universal accessibility to postsecondary education for all qualified students in this province, we feel it is essential to guarantee the quality of that educational experience.[17]

A University Educational Excellence Fund would also reflect Government's goals as underscored by the Minister in her June 24, 1989 speech to the Ontario Liberal Party Presidents Council, in which she restated the 1985 commitment of the then Opposition leader David Peterson:

> The Ontario Liberal Party will move quickly to restore quality to Ontario's university system, to ensure that qualified students receive the university places they deserve and to undo the damage created by a decade of Conservative neglect.

I am determined to, once again, see Ontario universities regarded not only as the best in Canada, but to be viewed as world class institutions. This is the only policy that makes human and economic sense.[18]

Council proposes that the University Educational Excellence Fund be a shared responsibility of both Government and students. Recognizing that the cumulative impact of years of critical underfunding will not be quickly remedied, it is recommended that Government support the Fund annually at a level equal to one-third of the estimated shortfall in Government base operating support for the preceding three years, beginning in 1990-91. Thus, for 1990-91, Council recommends that a minimum of $43.1 million be made available by Government through an additional 2.7% increase in base operating grants, to support enhanced educational quality in Ontario universities, reflecting the $129.2 million erosion in operating funding from 1987-88 to 1989-90. Council's procedure for estimating the shortfall in operating support is outlined in Appendix A.

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[17] University of Western Ontario, Brief to the Ontario Council on University Affairs, May 1989, pp. 1-2.

[18] Mr. David Peterson, Opposition Leader, March 1985, from "A Commitment to Lifelong Learning", Notes for Remarks by the Honourable Lyn McLeod, Minister of Colleges and Universities to the Ontario Liberal Party Presidents Council, June 24, 1989.

Following current policy on tuition fee increases, Council proposes that formula fees be increased by a percentage consistent with the recommended increase in Government grants, to provide additional fee revenue for targeting quality enhancements in teaching. In future years, Council notes that it may be necessary to consider proportionately larger contributions by students, who are the direct beneficiaries of improvements in the quality of instruction.

Council considers its recommendation for 1990-91 to be the minimum amount required to begin addressing, in a substantive way, the restoration of instructional quality. Further, Council believes quality restoration to be a priority for the university system and, therefore, recommends that the ongoing need for a University Educational Excellence Fund be recognized annually in the provision of operating support for the universities.

Accordingly, Council *recommends to the Minister:*

OCUA 89-41
GOVERNMENT GRANTS for 1990-91 TO SUPPORT EDUCATIONAL EXCELLENCE IN PROVINCIALLY-ASSISTED UNIVERSITIES AND THEIR AFFILIATED COLLEGES, RYERSON POLYTECHNICAL INSTITUTE, THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION, THE ONTARIO COLLEGE OF ART, AND DOMINICAN COLLEGE

THAT in addition to the amount recommended in 89-39, Government grants be increased by a further 2.7% to provide a minimum of $43.1 million to support enhancements to the quality of instruction at provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College or Art, and Dominican College through the establishment of a University Educational Excellence Fund.

OCUA 89-42
FORMULA FEE RATES FOR 1990-91 TO SUPPORT EDUCATIONAL EXCELLENCE

THAT in addition to the formula fee increases recommended in 89-40, formula fee rates for 1990-91 be increased a further 2.7%, the same percentage increase recommended for Government grants in 89-41, to provide $10.1 million in formula fee revenue to be committed to improving the quality of instruction at the provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College, and that this increase in formula fee rates be fully reflected in the Ontario Student Assistance Program.

2.3 Cyclical Renewal of Physical Plant

In April, 1988 the Government announced a commitment of $440 million for the funding of capital projects at universities and colleges for the four-year period from 1988-89 to 1991-92. As part of this pre-commitment, a total of $77.7 million has been made available to Ontario universities for 1989-90.

While Council applauds the Government's initiative to increase capital funding, it remains concerned over the meagre level of funding available for the renewal of physical plant. COU notes that a long period of underfunding has precipitated a situation in which university buildings in Ontario are depreciating faster than they are being renovated or replaced. It is noted further that in 1986-87, Ontario universities spent less per student on buildings and related land and site services than did universities in all but one other province.[19]

Council notes that of the $77.7 million allocated for 1989-90, $43.3 million is available through the Major Project Fund which provides for increased space in the universities and covers the carry-over costs of existing projects. The $10.0 million provided in respect of the Special Enrolment Accommodation Program will further assist in relieving the overcrowding associated with recent enrolment pressures. An amount of $4.4 million is available to assist with the construction of student residences. The remaining $20.0 million provided through the Renovation Fund will be directed toward maintaining existing plant and supporting projects identified by Council in Advisory Memorandum 88-IV. At that time, Council recommended capital funding for 1989-90 of $40 million for new major repairs, renovations, alterations, and replacement projects. Council notes that the $20 million extended through the Renovation Fund falls seriously short of Council's recommendation and that the Fund has not kept pace with the rapid escalation in costs experienced in Ontario in the last few years.

It remains Council's position that the provision of on-going cyclical renewal is essential to maintain the capital stock of the universities and that the necessary renewal will provide direct benefits for research and teaching in the universities. Council notes with concern accounts of capital deterioration provided at the 1989 Spring Hearings. For example, the University of Guelph indicated that:

> ... a backlog of capital projects related to renovation and replacement of existing facilities amounting to something in the order of $100 million... While the introduction of the MCU capital renewal and replacement grant

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[19] Council of Ontario Universities, op. cit., p. 7.

> was welcome, it only meets a fraction (approximately 1/2 to 1/3) of the ongoing need and does nothing to reduce the backlog of projects. We see this as an increasingly serious problem not only for Guelph, but for all universities within the system.[20]

Council continues to believe that annual funding equal to 1% of the value of the space inventory in the university system is the minimum necessary for major repairs, renovations, alterations and replacement projects. For 1990-91, the value of this space inventory has been adjusted for inflation by increasing last year's recommendation for capital assistance by 5.07%, which is the most recent annual increase in Canada's GDP Implicit Price Index for Non-Residential Construction. Council notes that this inflationary adjustment of 5.07% may severely understate escalating construction costs in Ontario. Wage increases in Ontario's construction industry exceeded those registered in other regions and are therefore not fully reflected in a national implicit price index.

Accordingly, Council *recommends to the Minister:*

OCUA 89-43
LEVEL OF SUPPORT FOR MAJOR REPAIRS, RENOVATIONS, ALTERATIONS AND REPLACEMENT PROJECTS IN 1990-91 FOR THE CYCLICAL RENEWAL OF THE EXISTING CAPITAL STOCK

THAT funds for capital assistance for new major repairs, renovations, alterations and replacement projects in 1990-91 be $42 million, plus any amount required for carry-overs and essential new construction.

2.4 Deferred Maintenance of Physical Plant

In Advisory Memorandum 88-IV, Council recommended that funds for capital assistance include an allocation for deferred repairs, renovations, alterations and replacement projects, stating:

Council believes that the underfunding of physical plant maintenance can only lead to the continued, unnecessary deterioration of university buildings. The Government's capital investment is being devalued since the funds available for repairs, alterations and replacement projects are inadequate. The situation must be remedied.[21]

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[20] University of Guelph, Brief to the Ontario Council on University Affairs, May 1989, p. 5.

[21] Ontario Council on University Affairs, Advisory Memorandum 88-IV, p. 18.

Council's concerns over deferred maintenance of physical plant were echoed by institutions in the course of the 1989 Spring Hearings. The University of Western Ontario noted:

> The University's physical plant of buildings and grounds is progressively eroding -- and the resources are unavailable to address these pressing concerns. Deferred maintenance, postponed to enable the institution to address its immediate instructional concerns, will result in formidable costs in the future, when deterioration of structures has progressed still further and the expense of rectification has escalated. This will coincide with the requirement of absorbing the operating costs for new buildings currently being added to the University's physical plant.[22]

Council estimates that the cumulative shortfall in Government funding for cyclical renewal from the inception of Council's advice on this matter to the present amounts to $287 million in 1989 dollars. Council recommends that Government address this problem over a ten-year period beginning in 1990-91, by funding annually 10% of the estimated cumulative shortfall in Government funding for cyclical renewal of the physical plant ($28.7 million).

Accordingly, Council *recommends to the Minister:*

OCUA 89-44
LEVEL OF SUPPORT FOR DEFERRED MAINTENANCE OF PHYSICAL PLANT IN 1990-91

THAT in addition to the amount recommended in 89-43, funds for capital assistance in 1990-91 include, at a minimum, $28.7 million for deferred repair, renovations, alterations and replacement projects.

2.5 Incremental Costs of Bilingualism Programs

Council recently completed its third study of the incremental costs associated with bilingualism in Ontario universities. Details of the costing method adopted by Council and the results of the study for each institution are provided in Advisory Memorandum 89-III.

In submitting its funding advice for 1989-90, Council anticipated the approximate level of this shortfall on the basis of preliminary cost study results. At that time, Council recommended that an additional $5 million be provided as an initial step in recognition of the incremental costs of bilingualism programs. Council recommended further that:

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[22] University of Western Ontario, Brief to the Ontario Council on University Affairs, 1989, pp. 4-5.

> if the preliminary provision recommended by Council is inadequate, Council will recommend that additional funds be provided in 1990-91.[23]

In allocating support for 1989-90, the Minister accepted Council's recommendation and provided for an additional $5 million in support of bilingualism activities.[24] The recently completed study found that the total cost of bilingualism activities in 1987-88 was $21.2 million. When escalated by the percentage increases in operating grants for 1988-89 and 1989-90, the estimated 1989-90 incremental costs of bilingualism were calculated to be $23.1 million. These costs exceed the bilingualism grants' allocation for 1989-90 by $1.7 million. This amount is increased by 8.6%, the increase for operating grants in 1990-91 recommended in Section 2.1.3, to arrive at the estimated shortfall of $1.8 million for 1990-91.

Accordingly, Council *recommends to the Minister:*

> *OCUA 89-45*
> *ADDITIONAL FUNDING FOR THE INCREMENTAL COSTS OF BILINGUALISM PROGRAMS*
>
> *THAT* $1.8 million be provided in 1990-91 in recognition of the documented incremental costs of bilingualism programs.

3.0 Conclusion

Council is convinced that the funds recommended in this Memorandum and summarized in Table 3 are the minimum required to maintain the Ontario university system. This minimum level of support does not allow for innovative and creative responses by institutions in meeting new demands in support of a more competitive economy. If greater demands are to be placed on Ontario universities, additional funding will be essential to meet these goals.

A statement by York University captures the concerns mirrored across the system:

> ... we are increasingly unable to respond effectively to the needs and aspirations of a society whose continued growth and prosperity depend, in

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[23] See Ontario Council on University Affairs, Advisory Memorandum 88-IV, p. 20.

[24] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H. V. Nelles, December 13, 1988.

> ever multiplying and diverse ways, on the lifelong learning possibilities that universities can provide.[25]

A weakened university sector is not in the provincial interest as we enter into Free Trade with the United States. In this regard, the Advisory Council on Adjustment emphasizes:

> Universities are a provincial government responsibility, and the provincial governments must address the financing issue if universities are to fulfil their role in technological innovation.[26]

The uninterrupted decline in per student expenditures afforded universities since 1977-78 is well documented.[27] Since that time, growth in university operating support has not kept pace with overall growth in the provincial economy. Government, by accepting Council's recommendations contained in Advisory Memorandum 89-II, has demonstrated an unprecedented commitment to enhance university financing by taking into account recent enrolment growth and promoting a coordinated and planned approach to future enrolment. As Government endeavours to embrace a human resource strategy consistent with the competitiveness goals of the Province, Council emphasizes that base funding provisions must likewise be enhanced to accurately reflect the demands of an environment in which universities will be required to make an even greater contribution toward social and economic development in Ontario.

Dr. H.V. Nelles,
Chairman

July 21, 1989

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[25] York University, Brief to the Ontario Council on University Affairs, May 1989, pp. 24-25.

[26] Advisory Council on Adjustment, Adjusting to Win, March 1989, p. 80.

[27] The Council of Ontario Universities notes that hospitals, elementary and secondary schools have all enjoyed real increases in per client expenditures. After allowing for inflation, schools spent 18% more for each pupil enroled in 1986-87 than they did a decade earlier, while universities spent 12% less for each FTE student enrolled in 1986-87.

Table 3

Summary of Grant Recommendations for 1990-91
($ million)

2.1	Maintenance of Basic Operating Support	1,715.8
2.2	University Educational Excellence Fund	43.1
2.3	Cyclical Renewal of Physical Plant	42.0
2.4	Deferred Maintenance of Physical Plant	28.7
2.5	Incremental Costs of Bilingualism	1.8
Total Grants Recommended		1,831.4

Appendix A

Revised Calculation of Shortfall in Funding for 1989-90

The estimate of the basic funding requirements for 1989-90 contained in Memorandum 88-IV has been revised to reflect updated estimates of CPI, furniture and equipment expenditures and 1988-89 base expenditures. The inflationary factors for salary and non-salary items have moved from 4.8% and 5.2% to 5.3% and 5.8% respectively. The furniture and equipment factor has been increased from $22 million to $32 million. The 1988-89 base expenditures have been increased from $1,955.8 million to $1,987.9 million. As a result, the revised estimate of the cost of basic funding objectives in 1989-90 is $2,215.3 million.

An estimate of total funds available to the Ontario university system has also been made reflecting information on government grants, fees, and other income. Council now estimates that total fee income (formula tuition and other fees) will be $398.2 million. Government operating grants supporting the cost of basic funding objectives will total $1,579.6 million; this total is the difference between the $1,676.9 million of total operating grants and the sum of $9.3 million in line item grants and $88 million in accessibility envelope grants. Other revenue is estimated to be $100.4 million ($91.1 million of which consists of universities' budget report values of other revenue, investment income and municipal and federal grants, and $9.3 million in line-item grants). Thus the total estimated revenue available to the system to meet the cost of basic funding objectives is $2,078.2 million.

The revised estimate of the shortfall in revenue compared to expenditures required to meet the basic funding objectives is $137.1 million ($2,215.3 - $2,078.2 million).

Council's estimate of total operating funding needs for 1989-90 is the revised estimate of the cost of basic funding objectives, $2,215.3 million and the additional $7.2 million recommended in Advisory Memorandum 88-IV. This equals $2,222.5 million.

The estimate of the total operating funds available for 1989-90 is the sum of the estimate of the funds available for the cost of basic funding objectives ($2,078.2 million) and an additional targeted operating grant provided for 1989-90 ($5.0 million for the incremental costs of bilingualism). This amounts to $2,083.2 million.

Total operating funding needs minus total operating funds available reveal a shortfall of $139.3 million ($2,222.5 million -$2,083.2 million). Since Council uses a three-year rolling average calculation of shortfall for the base adjustment, the 1986-87 shortfall of $10.1 million must be subtracted. Therefore, Council estimates that the shortfall in total operating revenue for 1989-90 is $129.2 million ($139.3 million - $10.1 million).

Table A-1

Revised Operating Funding Shortfall for 1989-90
($ million)

Council's Revised Recommendations		
Cost of Basic Funding Objectives (A)	2,215.3	
Additional Grants Recommended		
Incremental Costs of Bilingualism		5.0
International Graduate Student Fee Differential Waivers		2.2
Total Operating Needs (B)		2,222.5
Estimated Revenues Available		
Revenue Available for the Cost of Basic Funding Objectives (C)	2,078.2	
Additional Operating Grants Available		
Incremental Costs of Bilingualism		5.0
Estimated Total Operating Revenue Available (D)		2,083.2
Shortfall in Funds Available		
Funds Available for the Cost of Basic Funding Objectives (A-C)	137.1	
Funds Available for Total Operating Needs (B-D) (E)		139.3
1986-87 Shortfall (F)		10.1
Calculation of Shortfall Using Three-year Rolling Average (E-F)		129.2

Appendix B

The 1989-90 Base

This Appendix outlines the derivation of the 1989-90 base used in Council's funding exercise. For the purpose of this exercise, Council assumes that system expenditures equal total revenues, and estimates total operating revenues at $2,078.2 million in 1989-90. Table B-1 provides details of 1989-90 revenues by type.

Formula and Non-Formula Grants

The figure $1,579.6 million for 1989-90 found in Table B-1 is derived by subtracting $9.3 million in Line-Item Grants and $88 million in Accessibility Envelope Grants from the $1,676.9 million in Operating Grants for 1989-90 announced by the Minister.[1] This figure includes the grants provided as faculty renewal grants, international graduate student fee waiver grants, differentiation grants, Northern Ontario grants, bilingualism grants, institutional weight adjustment grants, program adjustment grants, research overhead/infrastructure grants, formula grants and the extraordinary grant. (Grant totals recommended by Council can be found in Advisory Memorandum 89-III.)

Formula and Other Fees

In each year, Council's funding base includes only that fee revenue which is derived from formula fees and other fees. Any revenue accruing to the universities as a result of the application of their discretionary tuition fee power has been excluded from the base. The 1989-90 formula fee revenue is estimated to equal $369.1 million. This is calculated by applying the 1989-90 formula fee rates and enrolment changes to the 1988-89 fees. This figure also includes an estimate of the supplementary foreign fee revenue and third-term graduate formula fees. The Other Fee Revenue estimate of $29.1 million was based on the universities' budget reports for 1989-90.

Other Revenue

Other revenue for 1989-90 of $100.4 million includes Ministry line-item grants of $9.3 million and an estimated $91.1 million in other sources of operating income including municipal and federal grants, investment income and other revenue. The $91.1 million was derived from the universities' reports on budgeted revenue for

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1. $1,670.6 million were announced for 1989-90 in a letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H. V. Nelles, December 13, 1988. An additional $6.3 million were subsequently announced in support of the Employer Health Levy Costs and French Language programming.

1989-90. Other revenue excludes any amounts provided for municipal taxation payments and income from gifts, donations and non-government grants.

Table B-1

Estimated University System Revenue for 1989-90
($ million)

Formula and Non-Formula Grants*	1,579.6
Formula Fees	369.1
Other Fees	29.1
Other Revenue**	100.4
Total	2,078.2

* Excludes Ministry line-item grants and Accessibility Envelope.

** Includes Ministry line-item grants.

89-VII

New Undergraduate Quasi-Professional Program Funding

Council has considered the advice of its Academic Advisory Committee with respect to the proposed new pre-service Bachelor of Education program - intermédiaire and supérieur level (Bed) at Laurentian University (see Appendix A) The urgent societal need for graduates of this program led Council, with reluctance, to agree to deviate from normal procedures and review this proposal separately so that the program might be in place for September, 1989.

Council has some concern, as does its Academic Advisory Committee, about the level of student demand. The Academic Advisory Committee in the report appended, observes that "it is the Committee's opinion that the projected steady-state enrolment may be rather optimistic." Subsequent to the Academic Advisory Committee's deliberations, Council received correspondence from the University of Ottawa which indicated significant excess capacity exists in a number of discipline areas at the intermédiaire and supérieur level, and expressed concern about future student demand in French language intermédiaire and supérieur division programs:

> If two Intermediate/Senior division programmes become available with a rather wide set of options offered, it is very obvious that enrolments will simply not materialize for a sizeable number of these options, leading our Faculty to entertain the real possibility of deleting a number of options. One is then faced with the existence of two incomplete sets of teaching options in each programme, unless substantial additional funding is provided to support low-enrolment programmes.[1]

The Ministry of Education has indicated that consideration of the Laurentian program:

> ...should take into account the possibility of fragmentation which might have a negative effect on the viability of programmes at both Ottawa and Laurentian and should be contingent upon the availability of appropriate facilities and staff at Laurentian University.[2]

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[1] Letter from Dr. Louis-Gabriel Bordeleau, Dean of the Faculty of Education, University of Ottawa, to Dr. H.V. Nelles, July 10, 1989.

[2] Letter from Julie A. Lindhout. Director, Centre for Teacher Education to J. McKay, Director, University Relations Branch, July 13, 1989.

Despite these concerns, Council is also convinced of the overwhelming societal need for graduates of French language teacher education programs, particularly in Northern Ontario. In addition, the program may increase the pool of French teachers available to school boards elsewhere in Ontario and Canada. Consequently, Council believes that the program is deserving of Government support.

In reviewing this program Council notes that Laurentian proposes to offer 6 of the 18 intermédiaire and supérieur division options in 1989-90. However, in view of the concerns cited, Council recommends that approval should be limited to offering the 6 options proposed for 1989-90.

While Council recognizes the restrictive nature of a six-option program it is convinced that further evidence of adequate student demand is necessary before approval can be given to an expansion of these offerings. To this end, Council recommends that Laurentian be required to provide the Minister with evidence of consultation with the University of Ottawa on the level of student demand and the co-ordination of offerings in low enrolment options. If the Minister is concerned at that time about potential student demand the Minister may refer the issue to the newly created Ontario Council on Teacher Education before confirming funding eligibility of the additional options at Laurentian. If there are no concerns, these enrolments would become eligible BIUs.

Council believes this condition is essential to prevent the fragmentation noted above. Since both institutions have co-operated closely in the past as evidenced by their letters to Council, and in future both will be required to take note of each others enrolment plans in the forthcoming corridor negotiations, it is reasonable under the circumstances that approval of additional options should be contingent upon such consultation. Collaborative relationships in education between Ottawa and Laurentian have even been referred to in the press as a possible model of inter-institutional system planning for French language services.[3]

Council, therefore, believes that the Bed program in pre-service teacher education - intermédiaire and supérieur at Laurentian University should be recommended for funding eligibility, even in a time of economic constraint.

Accordingly, Council *recommends to the Minister:*

OCUA 89-46

ELIGIBILITY OF ENROLMENT IN THE PRE-SERVICE FRENCH LANGUAGE BACHELOR OF EDUCATION -INTERMÉDIAIRE AND SUPÉRIEUR PROGRAM AT LAURENTIAN UNIVERSITY FOR FUNDING PURPOSES IN 1989-90

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[3] Denis Carrier, **L'Université franco-ontarienne,** Vers une stratégie d'expansion: créer un réseau d'institutions, Le Devoir, 29 juin 1989.

THAT enrolment in the French language Bed pre-service Bachelor of Education -intermédiaire and supérieur program at Laurentian University be counted as eligible BIUs for funding purposes beginning in 1989-90 - the program to be in Category 3, with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

Dr. H. V. Nelles,
Chairman

July 21, 1989

Appendix A

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Pre-service Bachelor of Education
Intermédiaire and Supérieur Level (Bed)
Laurentian University
(Full Review)

New Undergraduate Quasi-professional Program Considered for Funding Eligibility

On June 19, 1989, Laurentian University requested that Council consider for funding approval a new undergraduate quasi-professional baccalaureate program in the French Language in Education at the intermédiaire and supérieur level (Bed) offered through its Ecole des sciences de l'éducation. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU). Council referred the program to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below:

1. Proposed Curriculum

The proposed pre-service Bachelor of Education program - cycle intermédiaire and supérieur proposed by Laurentian University is intended to train teachers who would be employed in the French-language schools in Ontario offering grades 7 to 12.

The program will be offered in both the concurrent and consecutive format. Students will be required to complete two sessions of practical teaching in designated schools - one session teaching at the intermediate level and one session teaching at the senior level.

2. Academic Quality

The program received approval from the Senate of Laurentian University, May 21, 1981.

3. Financial Viability

By letter of June 12, 1989, the President and Chairman of the Board of

Governors of Laurentian University indicated to Council that:

> Laurentian University is in full support of the request and has agreed to deal with the resource implications in its budget operation.[1]

Council is satisfied that Laurentian University is committed to ensuring the financial viability of this program.

4. Projected Enrolment

Laurentian University projects that 25 to 30 students will enrol in this program if it is offered in September 1989. Enrolment in the cycles intermédiaire and supérieur are projected to increase by ten students per year to 1992-93 when the projected steady-state enrolment level of 60 students per year is achieved. It is the Committee's opinion that the projected steady-state enrolment may be rather optimistic.

5. Co-operation with other Post-Secondary Institutions

In Ontario, two institutions have responsibility for the offering of teacher education in the French language. The University of Ottawa offers programs for cycles primaire, moyen, intermédiaire and supérieur. Laurentian University is currently limited to cycles primaire, moyen and intermédiaire.

Laurentian University indicates that close links have developed between la Faculté d'Éducation de l'Université d'Ottawa and l'École des sciences de l'éducation at Laurentian in a number of areas related to programs in education. For many years, the University of Ottawa has offered courses in additional base qualifications at the supérieur level in French and another discipline. Following a 1986 agreement, la Faculté d'Éducation, in collaboration with l'Ecole des sciences de l'éducation, has offered a masters-level program in education with a concentration in psychopédagogie and educational administration on the Laurentian campus. This agreement is currently due for renewal and is expected to be extended for another three-year period by July 1989.

The two institutions are also in the process of working on the development of a single test of linguistic competence which could by used by each institution. Laurentian University intends to continue its relationship with the University of Ottawa in order to better meet the needs of the French-language schools in Ontario.[2]

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[1] Letter from Dr. John S. Daniel, President and Mr. Alan Querney, Chairman, Board of Governors, Laurentian Universitsy, to Dr. H.V. Nelles, June 12, 1989.

[2] Laurentian University, "Programme de formation initiale à l'enseignement" Option III - Cycles intermédiaire et supérieur, June 12, 1989, p. 9.

Laurentian's École des sciences de l'éducation also maintains close relations with la Faculté d'éducation du Collège Nipissing, a Laurentian affiliate, which serves the needs of English-speaking education students and schools in Northern Ontario.

6. Societal Need and Student Demand

This program will produce graduates who will meet a very strong societal need for teachers in Ontario who are trained to teach in the French language at the intermédiaire and supérieur school level. The shortage of teachers in the French language is most severe in the North, in the Catholic School Boards and in schools offering French immersion programs. However, there is also a strong, and largely unmet demand for French teachers from school boards across Ontario at all levels of instruction.

The submission from Laurentian University stresses that there exists a critical shortage of French-language teachers in Northern Ontario. The program proposed by Laurentian University would address this regionally specific societal need and provide regional access to a French-language program of teacher education in Northern Ontario. The University of Ottawa is currently the only university training teachers in the French language at the intermédiaire and supérieur level. The Committee notes that the existing Français program at the intermédiaire and supérieur level offered by the University of Ottawa may have some capacity. However, it has been demonstrated that the students who leave the North to study at the University of Ottawa do not necessarily return to the North to work. For this reason, the shortage of qualified teachers trained in the French-language may worsen without the creation of a similar program in the North.

The Committee is aware that for the first time since the 1960's, Ontario faces the possibility of a general shortage of teachers and is currently experiencing a shortage of teachers qualified to fill positions in French-language public elementary and secondary schools.[3] In its submission to the Committee, Laurentian notes that almost one-half of the entrants to the teaching profession in Ontario's French-language schools since 1984 have come from out-of-province, while only 22% of the English-language entrants came from out-of-province.[4] The recent enrolment growth experienced in French immersion programs in elementary and secondary schools in Ontario has served to heighten the demand for French-language teachers. At the secondary level, enrolment has risen from 4,291 in 1983 to 16,817 in 1987, while

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[3] Laverne Smith, Perspectives on Teacher Supply and Demand in Ontario, 1988 - 2008, Toronto: Queen's Printer for Ontario, 1988, p. 43.

[4] Laurentian University, op. cit., Annex 10, "French-Language Teacher Education - a Provincial Profile", p. 1.

French immersion enrolment in elementary schools has risen from 38,213 in 1982 to 76,162 in 1987.[5]

A recent study, Perspectives on Teacher Supply and Demand in Ontario, 1988 - 2008, suggests that the shortage of French teachers is a national problem and indicates:

> Many boards report that they are actively recruiting outside of Ontario with particular targeting of Provinces such as Quebec and New Brunswick which have large francophone populations...Other provinces such as British Columbia, which is reported to have an increase of about 5,000 students in French immersion classes over the past year, are also actively recruiting.[6]

This same report concluded that:

> It is quite apparent that the single most urgent and critical area of demand for new teachers at this time exists in French programs.[7]

Ministry of Education data, provided by Laurentian University, indicates that in 1987-88, 360 Letters of Permission to hire teachers from out-of-province or who were unqualified in the division of employment, were issued for French-language schools, 184 of which were issued in order to fill positions at the intermediate and senior level.[8]

A recent study, conducted by The Teacher Education Review Steering Committee (September 1988), a body established by the Ministries of Colleges and Universities and Education, noted "a continuing shortage of teachers in the French community"[9]. Given the potential magnitude of the teacher shortage in Ontario, and the need for coordination among the groups involved in teacher education, this Committee recommended the establishment of a Provincial Advisory Council known as the Ontario Council on Teacher Education (OCTE) to advise the Ministers of Colleges and Universities and Education on a wide range of issues related to teacher education in Ontario. This Council is currently being established.

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[5] Ibid., Annexe 10, p. 2.

[6] Laverne Smith, op.cit., p. 12.

[7] Ibid., p. 11.

[8] Laurentian University, op.cit., Annexe 10, p. 2 and Table 5.

[9] Final Report of the Teacher Education Review Steering Committee, Toronto: Government of Ontario, September 1988, p. 4.

The Academic Advisory Committee is convinced of the societal need in the North for the proposed new pre-service teacher education program in the French language - intermédiaire and supérieur level, at Laurentian University.

The program was strongly endorsed by the Conseil des étudiants de l'École des sciences de l'éducation[10] and the Association des Etudiants Francophones (AEF)[11] at Laurentian University.

The Committee is satisfied that there is both a student demand and a significant societal need for the program.

7. Uniqueness

The proposed program is not unique and is very similar to the French-language program at the intermédiaire and supérieur level offered by the University of Ottawa. However, given the serious shortage of French-language teachers in Ontario and Canada, the Committee believes that the duplication of an existing program is justifiable and essential to the production of a substantially greater number of French-language teachers.

8. Local and Regional Support for the Program

The Committee received evidence of considerable local and regional support for the introduction of a cycle intermédiaire and supérieur at Laurentian University. The following organizations indicated their support for the program:

Association des enseignantes et des enseignants franco-ontariens;

Projet Communautaire des Services en Français dans le District de Sudbury;

l'Association franco-ontarienne des conseils d'écoles catholiques (AFOCEC);

Les Conseils des écoles séparées catholiques;

Conseils des écoles séparées catholiques du district de Sudbury et du district de Supérieur-Nord;

Conseil de l'éducation de Sudbury and de la Rive Nord; and the

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[10] Letter from Terry Papineau, Président du Conseil des étudiants de l'Ecole des sciences de l'éducation to the Honorable Lyn McLeod, January 3, 1989.

[11] Letter from Jean Dennie, Président, Association des Etudiants Francophones, to Dr. O. Tremblay, Laurentian University, January 3, 1989.

Conseils des écoles séparées catholiques de Gogama, Toronto, Essex, Rive Nord, Hearst, Kirkland Lake et Nipissing.[12]

The Committee is satisfied that there is extensive local and regional support for this program.

9. Institutional Appropriateness

Laurentian University has an established École des sciences de l'éducation which currently offers education programs in the French language to the moyen-intermédiaire level, and an education faculty committed to meeting the educational needs of the North and the Province. Faculty are currently being hired to provide the supérieur component of the program. Many faculty members are heavily involved with local school boards in special projects such as "Écoles phares" with the conseil des écoles séparées Catholiques du District de Sudbury and the "Excellence" project with seven conseils scolaires du Nord. These projects focus on the utilization of modern technology in teaching and the improvement of teaching skills.

The physical and library facilities required to offer the program are in place, the University has related program strengths in the Arts, Sciences and Social Sciences, and has developed strong academic links with the Faculty of Education at the University of Ottawa.

The Committee is satisfied that the pre-service Bachelor of Education program - cycles intermédiaire and supérieur - is an appropriate and timely development at Laurentian University.

10. Funding

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that

> enrolment in the new Bed program in pre-service Bachelor of Education at the intermédiaire and supérieur level in the French language at Laurentian University be recommended to the Minister as eligible for counting.

Academic Advisory Committee
June 29, 1989

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[12] Laurentian University, op.cit., pp. 14-15.

89-VIII The Ontario Graduate Scholarship Program 1990-91

1.0 Introduction

The Government of Ontario established the Ontario Graduate Scholarship Program in 1973 to encourage excellence in graduate studies. Since then, this program has made available a total of 18,145 scholarships to outstanding graduate students studying at Ontario universities. Council wishes to underscore the importance of this program for attracting and nurturing excellent scholars in this Province.

In this Memorandum, Council submits its advice on the value, number, and distribution of the Ontario Graduate Scholarships for 1990-91. This advice is tendered in accordance with Council's long-term objectives for the Ontario Graduate Scholarship Program as outlined in Advisory Memorandum 85-VI, The Ontario Graduate Scholarship Program, 1986-87 and the modifications to the institutional award category which were recommended in Advisory Memorandum 87-IX, The Ontario Graduate Scholarship Program, 1988-89 and accepted by the Minister.

2.0 Scholarship Stipend Value

In establishing the minimum stipend value for 1989-90, the Minister accepted Council's advice set forth in Advisory Memorandum 88-VI, The Ontario Graduate Scholarship Program 1989-90. Following Council's recommendation, the Minister announced that the value of the Ontario Graduate Scholarship (OGS) stipend for 1989-90 would be increased from the 1988-89 level of $9,510 or $3,170 per term to $10,200 or $3,400 per term.[1] This represented a 7.26% increase in the value of the award.

To encourage excellence in graduate studies within the Ontario university system, Council believes that the OGS stipend must be set at a level which will attract and retain superior graduate students. Since Advisory Memorandum 85-VI, Council has recommended repeatedly that the value of the OGS stipend should be restored to its original level of 80% of the average value of the Federal government scholarships available from the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council (SSHRC). As Table 1 illustrates, subsequent to this recommendation, the value of the award increased from 62.9% in 1985-86 to 77.2% of the average value of these two federal

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[1] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H.V. Nelles, June 8, 1989, p. 1.

Table 1

Comparative Scholarship Stipends

	OGS	NSERC PGS Awards[1]	SSHRC Doctoral Scholarships	OGS as % of NSERC/SSHRC Average Value
1974-75	$ 3,400[2]	$ 4,500	$ 4,000	80.0
1975-76	3,400	5,000	5,000	68.0
1976-77	3,750	5,520	5,500	68.1
1977-78	4,350	6,000	6,000	72.5
1978-79	4,500	6,360	6,360	70.8
1979-80	4,800	7,000	6,750	69.8
1980-81	4,890	8,500	7,860	59.8
1981-82	5,700	9,350	8,760	63.0
1982-83	6,270	10,500	9,720	62.0
1983-84	6,585	11,100	10,800	60.1
1984-85	6,915	11,600	11,340	60.3
1985-86	7,305	11,600	11,640	62.9
1986-87	8,760	11,600	12,000	74.2
1987-88	9,105	11,600	12,000	77.2
1988-89	9,510	12,750	12,240	76.1
1989-90	10,200	14,100[3]	12,720	76.1

Notes:

1. NSERC post-graduate scholarship (PGS) values are those in effect in the Fall of each academic year.
2. Adjusted to take account of the integration of fees into the award in 1976-77.
3. Average value of NSERC awards of $13,500 for years 1 and 2 of graduate studies and $15,000 for years 3 and 4 of graduate studies, weighted by the actual distribution of awards held in 1988 (60% in years 1 and 2 and 40% in years 3 and 4).

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awards by 1987-88. However, the value of the OGS award droppedto 76.1% of the average value of NSERC and SSHRC scholarships for 1988-89 and 1989-90.

Council is concerned that provincial support for graduate awards is not keeping pace with other major scholarships. Council remains convinced that if this scholarship program is to be restored to its original level of status, importance and effectiveness, the value of the scholarship must increase until the desired level of 80% of the mean value of the NSERC and SSHRC awards is achieved. The gains of the recent past must be built upon.

If the OGS award is to have 80% of the estimated mean value of the NSERC and SSHRC awards in 1990-91, it will be necessary to raise the value of the OGS award to $11,297 or $3,766 per term, which would represent an increase of 10.8%[2]

Accordingly Council *recommends to the Minister:*

OCUA 89-47
ONTARIO GRADUATE SCHOLARSHIP STIPENDS 1990-91

THAT in 1990-91, Ontario Graduate Scholarships carry a minimum stipend value of $11,297 or $3,766 per term.

3.0 Number of General Awards

As indicated in Table 2, since 1978-79, with the exception of 1981-82, the total number of Ontario Graduate Scholarship awards available has been maintained at 1,200. Council is concerned that there has been a steadily increasing disparity between the number of qualified applicants and the number of stipends awarded. During the period from 1978-79 to 1989-90 while the number of OGS applications has increased by 56%, the proportion of applicants supported by the program has declined from 23.8% in 1978-79 to 15.3% in 1989-90. During this same period the total number of awards available has not increased from the initial number of 1,200.

The greatest application pressures in 1989-90 came from the social sciences, humanities, and biological sciences. As Table 3 illustrates, notable increases have occurred in all disciplines since 1979-80.

The growth in the number of applicants over the last decade, without any corresponding increases in the number of awards, has resulted in many excellent applicants being denied support. Council remains extremely concerned about the continuing decline in the proportion of awards to applicants.

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[2] The 1990-91 NSERC estimate used in the calculation is $14,847, derived as the weighted average of the current 1989-90 NSERC values of $13,500 for years 1 and 2 and $15,000 for years 3 and 4 of graduate studies ($14,100), inflated by a cost-of-living factor of 5.3%. The 1990-91 SSHRC value is estimated to be $13,394, which is the 1989 value ($12,720) inflated by an estimated cost-of-living factor of 5.3%.

Table 2

Number of OGS Awards and Applicants 1978-79 to 1989-90

	Number of Awards Available	Total Number of Applicants[1]	% of Applicants Supported by the Program
1978-79	1,200	5,041	23.8
1979-80	1,200	5,171	23.2
1980-81	1,200	5,711	21.0
1981-82	1,000	5,971	16.7
1982-83	1,200	6,249	19.2
1983-84	1,200	7,222	16.6
1984-85	1,200	7,320	16.4
1985-86	1,200	7,305	16.4
1986-87	1,200	7,190	16.7
1987-88	1,200	7,473	16.1
1988-89	1,200	7,771	15.4
1989-90	1,200	7,854	15.3

[1] Source: Ministry of Colleges and Universities, Students Awards Branch.

Table 3

OGS Applications – Distribution 1979-80 to 1989-90

	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90	% change 88-89 to 1989-90	% change 79-80 to 1989-90
Humanities	1,338	1,376	1,410	1,396	1,505	1,552	1,556	1,596	1,669	1,730	1,836	6.1	37.2
Social Sciences	1,931	2,128	2,265	2,260	2,670	2,627	2,681	2,594	2,670	2,747	2,785	1.4	44.2
Physical Sciences	590	658	685	810	865	914	756	726	708	930	960	3.2	62.7
Biological Sciences	929	1,100	1,124	1,196	1,430	1,403	1435	1,439	1,516	1,539	1,473	(4.3)	58.6
Applied Sciences	383	449	487	587	752	824	877	835	910	825	800	(3.0)	108.9
	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	5,171	5,711	5,971	6,249	7,222	7,320	7,305	7,190	7,473	7,771	7,854	1.1	51.9

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1. Source: Ministry of Colleges and Universities, Student Awards Branch.

In Advisory Memoranda 87-IX and 88-VI Council recommended that the number of awards available be increased by 100 to a total of 1,300. While additional scholarships have not been created to date, Council is encouraged by the Minister's comments in this regard:

> The ministry will consider the possibility of increasing the number of graduate scholarships for the 1990-91 program year.[3]

Council continues to believe that the number of OGS awards should be increased. Council therefore recommends that the total number of awards for 1990-91 be increased from 1,200 to 1,300.

Accordingly, Council *recommends to the Minister:*

OCUA 89-48
NUMBER OF GENERAL ONTARIO GRADUATE SCHOLARSHIPS FOR 1990-91.

THAT for 1990-91, 1,300 Ontario Graduate Scholarships be made available for:

a) open competition;
b) institutional awards; and
c) visa students; and

that institutional awards for 1990-91 be distributed according to Recommendation 87-40 in Advisory Memorandum 87-IX.

4.0 Targetted Doctoral Student Awards

Council notes that the availability of scholarships will have a critical role to play in alleviating faculty shortages which are predicted to reach significant proportions by the mid-1990s. In Advisory Memorandum 89-VI, Council noted:

> the age profile of the university professoriate is such that as much as one-third of existing faculty may need to be replaced over the next ten years. At present levels of enrolment, Canadian graduate schools will not be able to meet the projected need for personnel with advanced

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[3] Letter from the Honourable Lyn McLeod, Minister of Colleges and Universities, to Dr. H.V. Nelles, June 8, 1989, p.1.

degrees. A shortage of young academics in the international labour market will exacerbate difficulties of finding new teaching staff to replace existing faculty in Ontario.[4]

Universities in Ontario will not be alone in this recruitment challenge. Institutions in other jurisdictions, confronting the same pressures, will be competing with Canadian universities for new faculty. A recent study in the United States projects substantial faculty shortages over the period 1997 to 2007. The study points to particular shortages in the Humanities and Social Sciences over this period, at which time only 7 available candidates for every 10 positions are anticipated in these fields.[5]

Based on faculty age profiles in Ontario universities, retirements can be expected to reach significant levels starting in 1995 and be sustained at high levels through to approximately 2010. While all disciplines will encounter significant replacement demands over this period, available data suggest that overall levels of replacement demand will be led by particularly pronounced numbers of retirements in certain fields such as English Languages and Literature, History, Mathematics, Psychology and Commerce, Management and Business Administration.

The need to make graduate study, in particular doctoral programs, a more attractive option to prospective scholars is evident. Ontario must be prepared to continue its lead role in the production of new faculty, as institutions both in the province and in other provincial jurisdictions look to Ontario graduates as an important source of future faculty.

Council is convinced that an increase in the total number of Ontario Graduate Scholarships is an appropriate and necessary response as Ontario universities seek to attract qualified new scholars in the year ahead. Enhanced fellowship support which reduces the financial burden, will serve to increase the returns to graduate study and in so doing, attract prospective students to graduate education. By attracting more top scholars into doctoral programs, an expanded OGS system will also ensure that institutions are able to meet or possibly exceed their anticipated enrolment growth as identified in the corridor negotiations process. The introduction of supplementary doctoral awards as recommended below would ensure enhanced access for master's students to the scholarships recommended in 89-48 of the previous section.

Given the substantial lead time involved in the production of doctoral students, it is important that immediate measures be adopted to attract enrolments in critical programs to ensure that sufficient numbers of qualified graduates are available as faculty retirements begin to peak in the late 1990s.

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[4] Ontario Council on University Affairs, Advisory Memorandum 89-VI, Government Support of the University System in 1990-91, p.6.

[5] Bowen, William G. and Sosa, Julie Ann, Prospects for Faculty in the Arts and Sciences, pp. 136-137, Princeton University Press, 1989.

To effectively relieve faculty shortages, it is critical that these awards are not allocated according to student demand, but rather are targetted to students studying in those disciplines experiencing highest levels of faculty replacement demand who demonstrate intentions to pursue academic careers. In this regard, Council will recommend on the allocation of these awards based on analysis of anticipated faculty replacement needs undertaken by the Council of Ontario Universities or the Ontario Council on Graduate Studies.

Accordingly, Council *recommends to the Minister:*

OCUA 89-49
SUPPLEMENTARY ONTARIO GRADUATE SCHOLARSHIPS

THAT in addition to the awards recommended in 89-48, supplementary Ontario Graduate Scholarships be made available to doctoral students intending to pursue academic careers, targetted to disciplines experiencing high levels of faculty replacement demand, as identified with the assistance of the Council of Ontario Universities or the Ontario Council on Graduate Studies, according to the following schedule:

a) 200 in 1990-91;
b) 400 in 1991-92;
c) 600 in 1992-93;
d) 800 in 1993-94;

and that the number of these supplementary awards be reviewed at five year intervals beginning in the year 2005-2006.

5.0 Visa Student Awards

The Ontario Graduate Scholarship Program rewards visa student scholars for academic excellence and permits Ontario universities to compete with other provinces, and other nations, for outstanding visa students.

Council believes that the presence of a minimum number of academically outstanding visa graduate students in Ontario provides great benefits to the universities in which they are enrolled. Council recommends, therefore, that the present number of visa student awards be continued.

Accordingly, Council *recommends to the Minister:*

OCUA 89-50
ONTARIO GRADUATE SCHOLARSHIPS TO PERSONS ON STUDENT VISAS IN 1990-91

THAT in 1990-91, 60 scholarships be reserved for persons who at the time of application are student visa holders.

6.0 Conclusion

The Ontario Graduate Scholarship Program has the potential to continue to be an effective instrument to enhance the quality of the graduate enterprise in Ontario and to further the Government's objectives of achieving quality and excellence in the Ontario university system. A strong Ontario Graduate Scholarship Program can ensure the presence of a critical mass of excellent graduate students at Ontario universities. The encouragement, recognition, and reward of academic excellence are crucial to the growth and competitiveness of the provincial economy in an increasingly knowledge-based society.

An expanded and strengthened OGS program can effectively respond to the hiring challenges of the 1990s. The enhanced availability of awards will encourage participation in doctoral programs, thereby assuring institutions of a steady supply of qualified scholars with which to maintain existing capacity or accommodate growth in the face of large scale retirements. This expansion of graduate opportunity with a view to replacing the retiring professoriate will at the same time ensure that private industry will not be denied highly trained researchers as the universities' needs expand.

Council is convinced that the recommendations set forth in this Memorandum will continue to help restore the status, importance, and effectiveness of the Ontario Graduate Scholarship Program.

Dr. H.V. Nelles,
Chairman

October 20, 1989

89-IX New Undergraduate Quasi-professional, Special and Professional Program Funding 1990-91

1.0 Introduction

In this Memorandum, the Ontario Council on University Affairs recommends on the funding eligibility of nine undergraduate programs in accordance with the procedures for full review set out in Advisory Memorandum 82-VII, "Undergraduate Program Approvals" and the procedures for cursory review set out in Advisory Memorandum 89-I, "New Undergraduate Quasi-professional, Special and Professional Program Funding".

The Council has considered the advice of its Academic Advisory Committee, which is responsible for recommending to Council on the funding eligibility of all quasi-professional, special and professional undergraduate programs. Council accepts the Academic Advisory Committee's advice, and is convinced that the following programs should be recommended by the Minister for funding eligibility, even in a time of economic constraint:

University of Guelph:

Engineering Systems and Computing Major (BScEng) - See Appendix A
Environmental Engineering Major (BscEng) - See Appendix B
Food Engineering Major (BscEng) - See Appendix C

McMaster University:

Civil Engineering and Computer Systems (BEngCS),
Cursory Review - See Appendix D

Geography and Environmental Science (Hons. Bsc),
Cursory Review - See Appendix E

Geography and Environmental Studies (Hons. BA),
Cursory Review - See Appendix E

Nipissing College, Laurentian University:

Bachelor of Education (BEd), Senior Division - See Appendix F

University of Toronto:

Computer Engineering (BASc) - See Appendix G

Council has considered the advice of its Academic Advisory Committee that one program:

York University:

Health Studies (BA Ordinary) - See Appendix H
not be granted funding eligibility. Council endorses the Committee's finding, that the program does not meet all of Council's funding criteria, since there was insufficient evidence of societal need for the program, and because the student demand identified for continuing education in health studies and in health administration could be met by courses and programs already available through Atkinson College at York University.

2.0 Recommendations

Accordingly, Council *recommends to the Minister:*

OCUA 89-51
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE IN ENGINEERING MAJOR PROGRAM IN ENGINEERING SYSTEMS AND COMPUTING AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Bsceng Major program in Engineering Systems and Computing at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 3 with a weight of 2.0, as outlined in the Ministry's Operating Formula Manual.

OCUA 89-52
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE IN ENGINEERING MAJOR PROGRAM IN ENVIRONMENTAL ENGINEERING AT THE UNIVERSITY OF GUELPH FOR 1990-91

THAT enrolment in the Bsceng Major program in Environmental Engineering at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual.

OCUA 89-53
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF SCIENCE IN ENGINEERING MAJOR PROGRAM IN FOOD ENGINEERING AT THE UNIVERSITY OF GUELPH FOR 1990-91

THAT enrolment in the Bsceng major program in Food Engineering at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual.

OCUA 89-54
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ENGINEERING AND COMPUTER SYSTEMS PROGRAM IN CIVIL ENGINEERING AND COMPUTER SYSTEMS AT MCMASTER UNIVERSITY FOR 1990-91

THAT enrolment in the BEngCS program in Civil Engineering and Computer Systems at McMaster University be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual.

OCUA 89-55
ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF SCIENCE PROGRAM IN GEOGRAPHY AND ENVIRONMENTAL SCIENCE AT MCMASTER UNIVERSITY FOR 1990-91

THAT enrolment in the Honours BSc program in Geography and Environmental Science at McMaster University be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual.

OCUA 89-56
ELIGIBILITY OF ENROLMENT IN THE HONOURS BACHELOR OF ARTS PROGRAM IN GEOGRAPHY AND ENVIRONMENTAL STUDIES AT MCMASTER UNIVERSITY FOR 1990-91

THAT enrolment in the Honours BA program in Geography and Environmental Studies at McMaster University be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in

Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual.

OCUA 89-57
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF EDUCATION PROGRAM IN THE SENIOR DIVISION AT NIPISSING COLLEGE, LAURENTIAN UNIVERSITY FOR 1990-91

THAT enrolment in the BEd program in the Senior Division at Nipissing College, Laurentian University be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual.

OCUA 89-58
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF APPLIED SCIENCE PROGRAM IN COMPUTER ENGINEERING AT THE UNIVERSITY OF TORONTO FOR 1990-91

THAT enrolment in the BASc program in Computer Engineering at the University of Toronto be counted as eligible BIUs for funding purposes - the program to be in Category 3 with a weight of 2.0 as outlined in the Ministry's Operating Formula Manual upon verification that the University of Toronto has obtained those funds necessary to ensure the financial viability of the program as stated in the University's proposal for funding eligibility.

OCUA 89-59
ELIGIBILITY OF ENROLMENT IN THE BACHELOR OF ARTS (ORDINARY) PROGRAM IN HEALTH STUDIES AT YORK UNIVERSITY FOR 1990-91

THAT enrolment in the BA (Ordinary) program in Health Studies at York University not be counted as eligible BIUs for funding purposes.

Dr. H.V. Nelles,
Chairman

February 16, 1990

Appendix A

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Engineering Systems and Computing Major[1](BScEng) University of Guelph

New Undergraduate Professional Program considered for Funding Eligibility

On August 1, 1989, the University of Guelph submitted the new undergraduate professional Bachelor of Science in Engineering program in Engineering Systems and Computing to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE). Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below.

1. Proposed Curriculum

The proposed program is based on engineering and science courses that, with the exception of one course, are already offered by the School of Engineering or the Department of Computing and Information Science. Years 1 and 2 of the program are common to all Guelph engineering programs.

Program graduates will be generalist engineers with advanced systems engineering and computer application skills, rather than specialist computer engineers.

2. Academic Quality

The program was approved by the Senate of the University of Guelph on May 16, 1989.

3. Financial Viability

Board of Governors' approval was not required for the program.

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[1] The program was originally submitted to OCUA entitled "Information Engineering".

4. Projected Enrolment

A steady-state graduation rate of 20 students per year is projected after five years, based on a projected intake level of 30 to 40 students in year one.

5. Co-operation with other Post-secondary Institutions

No formal inter-university co-operation is planned, although informal contact with neighbouring institutions will be maintained.

6. Societal Need and Student Demand

The University notes that the rapid expansion of the capabilities of computer hardware and languages in the 1980's has increased the need for engineers trained to integrate computers into a broad range of industrial processes and designs.

Guelph notes that in some cases, there is a need for engineers capable of designing specialized hardware to the microchip level which is incorporated into a manufactured product. However, this program meets a need

> for persons capable of analyzing a complete system and selecting the appropriate commercially available computer hardware and software, and of writing suitable bridging software to assure reliable operation of a complex industrial process.[2]

To meet this need the proposed program combines the important elements of a modern systems engineering education with computer courses.

Both Job Futures: An Occupational Outlook to 1995[3] and the final report of the Ontario Task Force on Employment and New Technology entitled Employment and New Technology underline the widespread and increasing demand for graduates with a background in engineering systems and computing.

Graduates of the program would possess a sound knowledge of the basic engineering subjects and would have considerable expertise in digital electronics, computer hardware and applications software.[4]

Guelph anticipates that program graduates will find employment in all the traditional engineering, research, sales and service areas. Their training will be particulary relevant to engineering offices with complex local area networks, in process control, in food or industrial processing operations, in data collection and analysis or in any other setting where computer technology is or will be incorporated.[5]

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[2] University of Guelph, School of Engineering, Submission to OCUA: B.Sc. (Engineering) program Major in Engineering Systems and Computing, December 1989, p. 7.

[3] Employment and Immigration Canada, Job Futures: An Occupational Outlook to 1995, 1988-89 Edition, pp. 6-7, 66-67 and 91.

[4] University of Guelph, op. cit., p. 8.

Letters from numerous prospective employers indicated that graduates of this program would be in demand and would meet a specific need in many cases. For example, a representative of Chateau Des Charmes Wines Ltd. stated:

> ...there is a definite need for [this] program. There has been an increase in demand over the last ten years for people who can communicate within an industry, and then simplify operations with the aid of computer technology.
>
> Problems observed in the past with computerization at Bright's Wines and at Chateau des Charmes have revolved around the fact that computer specialists seldom have a good understanding of physical operations, and are limited in what they can do in the real world...your proposed engineer may be an ideal candidate for our company.[6]

Additional organizations indicating support for the program and a willingness to hire graduates include Acres International Limited, ASEA Brown Boveri, Computing Devices Company, Corman Technologies Inc., Digital Equipment of Canada Limited, Dow Chemical Canada Inc., EMJ Data Systems Ltd., Fiberglas Canada, Griffith Laboratories, IBM, ITT Canada Limited, Litton Systems Canada Limited, and The Proctor and Redfern Group.

Guelph expects that student demand will be sufficiently strong to meet their enrolment projections. Guelph notes that within the past five years, approximately ten students have, of their own volition, extended their engineering studies by one year in order to complete a Computer Science minor. The introduction of the Engineering and Computer Systems program will better meet this particular student demand.

The Academic Advisory Committee is satisfied that there is both a societal need and student demand for the program.

7. Uniqueness

This program will not compete with programs in either Computer Science nor Electrical Engineering, since it has a much broader generalist orientation, however it is not unique. The program is similar to programs offered at Carleton, Ottawa, McMaster, Toronto and Waterloo.

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[5] Ibid., p. 8.

[6] Letter from Mr. John Parochy, P.Eng, P.Ag., Research Scientist, Chateau des Charmes Wines Ltd., Niagara-on-the-Lake, August 7, 1989.

The Committee believes that the overlap between the proposed program and existing programs is justifiable due to the expressed demand for generalist engineers and student interest in the program in the catchment area served by the University of Guelph.

8. Local and Regional Support for the Program

CODE indicated that it supports the introduction of this program.[7]

Letters from prospective employers indicate there is local and regional support for the program.

9. Institutional Appropriateness

The program is consistent with the aims and objectives of the University of Guelph as defined in the document "Toward 2000: Challenges and Responses". Given that the Engineering Systems and Computing program at the University of Guelph developed out of an existing minor, and that the University has in place the necessary faculty and physical resources to offer this program, the Academic Advisory Committee is satisfied that this program is an appropriate development at the University of Guelph.

10. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Science in Engineering program in Engineering Systems and Computing at the University of Guelph be recommended as eligible for counting.*

Academic Advisory Committee
December 18, 1989

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[7] Letter from Mr. David W. Bacon, P.Eng, Chairman, Committee of Ontario Deans of Engineering, to Dr. Edward Monahan, Executive Director, Council of Ontario Universities, December 7, 1989.

Appendix B

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Environmental Engineering Major (BscEng)
University of Guelph

New Undergraduate Professional Program considered for Funding Eligibility

On August 1, 1989, the University of Guelph submitted the new undergraduate professional Bachelor of Science in Engineering program in Environmental Engineering to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE). Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below.

1. Proposed Curriculum

The Environmental Engineering program is based on an existing minor within the Biological Engineering major. The first two years of the program are common to all engineering students. The final two years include specialized environmental engineering courses and three specialized courses in environmental science. Areas of specialization include aquatic biology, earth science, industrial microbiology, ecology of terrestrial animals and urban and rural forests. The program is largely based on existing courses. A co-op option is available.

The program focuses on issues related to the implications of construction on the environment and the treatment of waste materials for successful re-use or return to the environment.

2. Academic Quality

The program was approved by the Senate of the University of Guelph on May 16, 1989.

3. Financial Viability

Board of Governors' approval was not required.

4. Projected Enrolment

The University projects a steady-state graduation rate of 20 students per year to be achieved in year eight of the program.

5. Co-operation with other Post-secondary Institutions

The University of Guelph indicated that discussions were held with the University of Waterloo to explore opportunities for cooperation regarding the Environmental Engineering program. However, the two institutions concluded that logistical difficulties given the size of undergraduate classes, and the relative self-sufficiency of the programs with respect to course offerings, precluded cooperation at this time. Guelph reports that the two institutions agreed to explore future opportunities for cooperation, should they emerge.[1]

6. Societal Need and Student Demand

The Committee notes that the rapid increase in demand for environmental protection measures and the reduction and elimination of environmental damage has caused a general increase in the demand for graduates with an engineering capability, a knowledge of environmental concerns and with techniques for addressing environmental concerns. Ontario currently houses 325 firms and organizations involved with environmental issues. Letters written in support of the program indicate that at the present time there is a shortage of environmental engineers to meet these organizations' needs.

Organizations such as Acres International Limited, UMA Engineering Ltd., The Metropolitan Toronto and Region Conservation Authority, the Ministry of Transportation, and Gore and Storrie Limited (an environmental engineering firm) strongly endorsed the need for graduates of this program.

The University is confident that student demand for the program will be strong, based on the success of the current minor and the numerous enquiries about the degree program which have been made to date.

The Academic Advisory Committee is satisfied that there is both a societal need and student demand for the program.

7. Uniqueness

Only one other environmental engineering program is currently offered in Canada and it is located at the University of Windsor. The University of Guelph notes that its program will be distinct from the program at Windsor in a number of ways. The program at the University of Windsor had its origins in chemical engineering and emphasizes chemical, air and noise pollution whereas the Guelph program emerged from a biological sciences base and emphasizes the analysis and management of man's impact on the environment, including environmental impact assessment, and the design and impact of waste management facilities.

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[1] University of Guelph, Request for Funding Eligibility: Environmental Engineering, August 1, 1989, p. 11.

The Committee notes that the two institutions serve distinct geographical areas, and is satisfied that, in light of the limited opportunities to study environmental engineering specifically, that it is highly unlikely that the Guelph program will jeopardize the viability of the Windsor program. The Committee is of the opinion that any duplication which may occur between the two programs is justifiable.

8. Local and Regional Support for the Program

Letters from potential employers of program graduates indicate strong local and regional support exists for this proposal. CODE indicated that it considered the program to be "a logical extension of the University's established activity in environmental science and engineering" and supported its introduction. Comments from COU indicated that no concerns or objections were raised in relation to the proposal. COU added that they believed demand for the program would be strong.

9. Institutional Appropriateness

In addition to existing strength in the environment-related sciences such as microbiology, environmental biology, and agriculture, the University of Guelph has a wide variety of departments, schools and other units including the Institute for Environmental Policy and Stewardship, the Centre for Toxicology, Environmental Biology, the Environmental Research Network, Land Resource Science, School of Landscape Architecture and the University School of Rural Planning and Development that provide direct support to aspects of the Environmental Engineering program.

The University of Guelph has been actively involved in environmental issues locally, with faculty and students working on design problems of waste management for the City of Guelph, and through faculty consulting activities. Regionally, the University has provided a focus for professionals involved with the environment by offering professional development seminars. Internationally, the University is developing student and faculty exchanges with institutions in Sweden, France and Germany. Faculty have also been involved in the assessment of environmental effects of overseas development projects.

Although no additional faculty or physical facilities were required to mount the program, as a supplement to existing facilities, the University of Guelph recently invested $35,000 in equipment for a new undergraduate environmental engineering laboratory.

The University has also assured the Committee that the program is consistent with the aims and objectives of the University of Guelph as stated in the document "Toward 2000: Challenges and Responses".

The Academic Advisory Committee is satisfied that this program is an appropriate development at the University of Guelph.

10. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Science in Engineering program in Environmental Engineering at the University of Guelph be recommended as eligible for counting.*

Academic Advisory Committee
November 20, 1989

Appendix C

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Food Engineering Major (BScEng) University of Guelph

New Undergraduate Professional Program considered for Funding Eligibility

On August 2, 1989, the University of Guelph submitted the new undergraduate professional Bachelor of Science in Engineering program in Food Engineering to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE). Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below.

1. Proposed Curriculum

The development of a Food Engineering program at the University of Guelph grew out of a minor in Food Engineering which was available to students enroled in the existing biological, water resources and agricultural engineering programs.

The four-year program includes courses in sanitation, waste management, quality control, the physical and biochemical properties of food materials, automation design, process control, and food packaging as well as core courses based in biological engineering. Years 1 and 2 of the program are common to all Guelph engineering programs. The program results from the repackaging of existing courses. A co-op option is available.

The objective of the program, broadly stated, is to produce food scientists trained in the engineering field.

2. Academic Quality

The program was approved by the Senate of the University of Guelph on May 16, 1989.

3. Financial Viability

Board of Governors' approval was not needed to assure the financial viability of this program since only one new course, Food Processing Engineering, was added and the additional resources necessary to offer the program were minimal.

4. Projected Enrolment

The program is expected to attract 15 to 20 additional students to the University per year. Although some of these students may ultimately decide to pursue the Biological Engineering program, the University projects a steady-state graduation rate of 10 students per year to be realized in the fifth year of operation.

5. Co-operation with other Post-secondary Institutions

Due to the unique focus of this program, no co-operation with other Ontario universities is foreseen. However, food engineering has been a recognised specialization in Europe for many years and the University of Guelph is in the process of developing faculty and student exchange programs with the École Nationale Supérieure des Industries Agricoles et Alimentaires in Massey and the École Nationale Supérieure d'Agronomie et des Industries Alimentaires in Nancy, France. The University of Guelph notes:

> The exchange will give the Food Engineering program at the School of Engineering interactions with the food engineering curriculum in France as well as the European food industry and will be of great benefit to the development of the program.[1]

6. Societal Need and Student Demand

According to the University of Guelph, the food processing industry contributes more than $15 billion in total sales to the economy of Ontario, making it the second largest industry sector in the Province. The University of Guelph indicates that from its inception in 1983, 10% to 20% of the co-op students in the Biological Engineering major have found employment in the food and beverage industry. However, the University placement office has consistently experienced a shortage of co-op students in this industry sector to fill the needs expressed.

The food industry itself encouraged the University of Guelph to develop a food engineering program given that "it is apparent that the greatest technical or professional skills deficiency that exists in the industry is in food engineering."[2]

Comments from J.M. Schneider Inc. indicated strong support for the program and a need to hire program graduates, stating:

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[1] University of Guelph, Request for Funding Eligibility : Food Engineering, August 2, 1989, p. 8.

[2] Letter from Mr. G.B. Fossenier, President, Ontario Centre for Farm Machinery and Food Processing, February 4, 1986.

> We in the food industry need this kind of support from universities to develop technical specialists, research and development specialists and managers if we are going to compete effectively in the global market. The proposed course content is excellent in providing a well "rounded" graduate who can contribute effectively to the organization almost immediately. I have not found a program more pertinent to our industry.[3]

Further evidence of a strong demand for the graduates of the program was provided by Griffith Laboratories which stated:

> Unfortunately, in Canada there is a lack of food engineers. Our own organization required several months to successfully staff a position that we had open. In talking with my colleagues at our U.S.A. company, I know there is also a shortage of qualified food engineers in that marketplace. I believe that the demand for your Food Engineering graduates will greatly exceed your expectations....The opportunities awaiting your graduates would range from research and development, sales, process engineering, plant operations, quality management and general management.[4]

The Committee was also provided with numerous other letters from representatives of the food processing industry which were equally adamant regarding the desperate need for the graduates of this program in the workforce.

Student demand for the program is expected to be strong. Graduates of the Biological Engineering program, now employed in the food processing industry, provided letters to the University indicating that the program would have been attractive to them had it been available to them and that graduates could expect to be in demand in the market-place.[5]

The Academic Advisory Committee is satisfied that the development of the Food Engineering program will meet the needs of the food industry by training students who will be specifically prepared to work in the field, and that student demand for the program will be sufficient to meet projected enrolments.

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3. Letter from Mr. John Lauer, MBA, Vice President, Operations, J.M. Schneider Inc., July 18, 1989.

4. Letter from Mr. David H. Lees, President and C.E.O., Griffith Laboratories, July 5, 1989.

5. Letters from B.J. Walczak, P.Eng., Canada Packers; Ms Paula Steel, Pillsbury Canada Ltd.; Ms Karen Lucas, Molson Ontario Breweries.

7. Uniqueness

This program would be unique in Canada.

8. Local and Regional Support for the Program

Letters written on behalf of the program suggest that there is strong local and regional support for the proposed program. Comments from CODE were strongly supportive of the program in view of its uniqueness and Guelph's recognized strength in the area of food engineering.

9. Institutional Appropriateness

The considerable strength already possessed by the University of Guelph in the biological sciences and in agriculture, food science and nutritional sciences make it a logical location for the offering of a Food Engineering program such as has been proposed.

The University of Guelph indicates that the Board of Undergraduate Studies has ensured that the Food Engineering program was consistent with the objectives for new programs stated in the University's aims and objectives document "Toward 2000: Challenges and Responses".

The Academic Advisory Committee is satisfied that this program is an appropriate development at the University of Guelph.

10. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Science in Engineering program in Food Engineering at the University of Guelph be recommended as eligible for counting.*

Academic Advisory Committee
November 20, 1989

Appendix D

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Civil Engineering and Computer Systems (BEngCS)
McMaster University

New Undergraduate Professional Program considered for Funding Eligibility
(Cursory Review)

On July 31, 1989, McMaster University submitted its new undergraduate, professional program in Civil Engineering and Computer Systems (BEngCS) for funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE).
Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below.

The Academic Advisory Committee notes that since September 1987, McMaster University has been offering a five-year program leading to the Bachelor of Engineering (BEng) degree in Civil Engineering and Computer Systems. This program was approved for funding eligibility by the Minister of Colleges and Universities, on the recommendation of OCUA, in 1988-89.

This five-year program is unique to the Ontario university system in that students obtain the full civil engineering requirement of the Canadian Engineering Accreditation Board (CEAB), plus significant additional training in computer science. There are currently five students enroled. The Academic Advisory Committee notes that this level is slightly below the University's projected enrolment levels established in 1986.[1]

McMaster has requested a change of degree designation for the program in order to provide it with greater visibility and to formally recognize the extra year of effort and the additional area of expertise which holders of the degree can claim.[2] McMaster argues:

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[1] Letter from McMaster University to the Ontario Council on University Affairs, June 10, 1986, p. 2.

> Considering the importance of the use of computers in engineering fields and the impact of new technologies such as micro-computers, computer aided design and communications, the greater visibility should help to attract students to an area which can provide significant benefit to the Engineering profession.[3]

The Academic Advisory Committee notes that the proposed name change was approved by the Senate of McMaster University on June 14, 1989 and that the financial viability of the program was not affected by that change. The name change was also endorsed by COU and CODE.

The Academic Advisory Committee is satisfied that the request for a change in degree designation for the Bachelor of Civil Engineering and Computer Systems program at McMaster University is reasonable and justifiable.

Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Engineering in Civil Engineering and Computer Systems (BEngCS) program at McMaster University be recommended as eligible for counting.*

Academic Advisory Committee
November 20, 1989

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[2] McMaster University, Request for Funding Eligibility: B.Eng.C.S. in Civil Engineering and Computer Systems, July 31, 1989, p. 3.

[3] Ibid., p. 3.

Appendix E

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Geography and Environmental Science (Honours BSc)
McMaster University

Geography and Environmental Studies (Honours BA)
McMaster University

New Undergraduate Quasi-professional Programs considered for funding Eligibility (Cursory Review)

On July 31, 1989, McMaster University submitted the new undergraduate quasi-professional Honours Bachelor of Science program in Geography and Environmental Science and the new undergraduate quasi-professional Honours Bachelor of Arts program in Geography and Environmental Studies to Council for recommendations regarding funding eligibility. In accordance with established procedures, Council circulated the proposals to the Council of Ontario Universities (COU).

Council referred the programs, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.
The Committee's finding's with respect to the programs are summarized below.

The Academic Advisory Committee notes that McMaster University currently offers Bachelor of Arts and Bachelor of Science degrees in Geography to the Honours level. The two new programs proposed are based on these existing programs but incorporate a minor focus on environmental themes. McMaster University indicates that:

> In total content, the Environmental Science and Environmental Studies concentrations differ from the existing geography programs by 22.5% and 20.0% respectively.[1]

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[1] McMaster University, Request for Funding Eligibility : B.Sc. in Honours Geography and Environmental Science and B.A. in Honours Geography and Environmental Studies, July 31. 1989, p. 1.

McMaster University indicated that these programs were developed in response to student demand for a concentration in environmental science/studies. Based on a survey of student interest, McMaster expects that the environmental science program would attract between five and ten students per year, while the environmental studies program could attract as many as twenty to twenty-five students per year. Although the Committee notes that these programs are not unique, McMaster indicates that the majority of the enrolment would be drawn from the pool of 170 full-time and 36 part-time students enroled in the existing geography programs. No net increase in total enrolment is projected.

The programs were designed to meet a student demand for environmental problem-solving skills and to consolidate the multi-faceted research on and interest in the environment from the McMaster community. The programs will include a quantitative methods component, substantial interaction between environmental science and environmental studies students, a fourth year thesis, and specialty streams which will include ecology, climatology, and health and environmental economics.

The proposed programs received Senate approval on January 11, 1989. McMaster has indicated that the Department of Geography intends to absorb the teaching responsibilities for the new courses involved and will also undertake to provide outstanding students with summer employment opportunities in an informal internship program.[2] The University has indicated that it will ensure the financial viability of the programs.

COU comments indicated general support for the development of these programs.

The Academic Advisory Committee is satisfied that these programs primarily involve the repackaging of existing courses, and that McMaster University's request for funding eligibility is reasonable and justifiable.

Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Honours Bachelor of Science program in Geography and Environmental Science at McMaster University be recommended as eligible for counting;*

and that

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[2] Ibid., p. 2.

enrolment in the Honours Bachelor of Arts program in Geography and Environmental Studies at McMaster University be recommended as eligible for counting.

Academic Advisory Committee
November 20, 1989

Appendix F

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Bachelor of Education (BEd), Senior Division Nipissing College, Laurentian University

New Undergraduate Quasi-professional Program considered for Funding Eligibility

On August 22, 1989, Nipissing College, with the support of Laurentian University, submitted the new undergraduate, quasi-professional Bachelor of Education program, Senior Division, to Council for a recommendation regarding funding eligibility. In accordance with established procedures, Council circulated the proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Ontario Association of Deans of Education (OADE) for comment. Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below.

1. Proposed Curriculum

The proposed program is a one year consecutive program, based on the Foundation and Methodology courses already offered in the existing primary/junior and junior/intermediate programs. The program consists of five full courses and 10 weeks of practice teaching. Nipissing indicates that only a selected range of senior subjects will be offered which will address senior division shortages in Northern Ontario. Nipissing plans to offer the senior division curricular studies via the use of adjunct personnel working in local secondary schools within the Nipissing and East Parry Sound school boards. Nipissing indicates

> Mentor/adjuncts would be identified during the time when students are selected to the I/S program and the availability of an appropriate senior division adjunct would help determine the subject areas selected for the I/S program in any one year.[1]

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[1] Nipissing College, Proposal for a Senior Division Program at Nipissing University College, August 22, 1989, p. 5.

Eighty percent of the program would be delivered by regular faculty.[2]

The range of subject areas requested for approval include Geography, History, English, Physical Education, Mathematics, General Science, Instrumental Music, Vocal Music, Visual Arts, Computer Science, Society Challenge and Change and French as a second language.[3]

2. Academic Quality

The program was approved by the Senate of Laurentian University on December 14, 1989.

3. Financial Viability

Nipissing indicates that it is committed to providing the resources necessary to deliver the program. The program has the support of Laurentian University. Nipissing adds that they intend to request Program Adjustment Funding in 1990 in support of the program, but this extra-formula funding is not critical to the offering of the program and, therefore, the offering of the program is not conditional upon the receipt of the funds to be requested.

4. Projected Enrolment

Nipissing College intends to admit 35 students to the program upon commencement in 1991-92. This level of enrolment is projected to be the steady-state enrolment for the program.

5. Co-operation with other Post-secondary Institutions

Nipissing College indicates that it plans to enhance its existing co-operative arrangements with Lakehead (development of distance delivery programs for in-service education), Ottawa (local delivery of an MEd) and Toronto (delivery of Technical Studies programs in Northern Ontario) universities. Nipissing also intends to initiate discussions with Canadore College regarding implementation of a technical studies program.

6. Societal Need and Student Demand

Nipissing College indicates that the need for a senior division in teacher education in North Bay has been precipitated by a recent shift in the supply and demand for secondary teachers in the North. A 1987 survey conducted by Nipissing of Mid-northern and Northeastern School Boards regarding their senior division needs for the years 1990 to 2000 revealed needs in almost all areas, but especially in French (2nd language), technical studies, mathematics, and science (biology/chemistry).[4] In Ontario in 1988-89, 487 "letters of permission" were issued in secondary subject areas, indicating that the system lacked 487 qualified secondary teachers.[5] Nipissing noted that many respondents anticipated dramatic increases in the need for secondary teachers in many areas. This observation was supported by the recent study on the supply of and demand for Ontario teachers, which reported that

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[2] Memorandum, from Mr. D. Marshall, Nipissing College, January 3, 1990, p. 4.

[3] Ibid., p. 1.

> Without significant increases in the number of teacher education graduates over the next few years, Ontario is likely to be in the throes of a teacher shortage in which retirements outstrip the number of teacher education graduates, supply, and part-time teacher pools dwindle, enrolments increase because of higher birth rates, immigration and migration, and policy changes and pressure for high quality education demand more teachers.[6]

Nipissing adds that the establishment of a pre-service Senior division program will enable them to meet a need for additional basic qualification courses at the senior level for teachers in Northern Ontario. Teachers in the Mid-northern and Northeastern regions are currently without locally delivered in-service programs at the senior level.

The Roman Catholic Separate School Board supports the proposed program stating:

> Certainly there will be a general need, in Northern Ontario, for teachers with specialization in the subject areas noted in the proposal from Nipissing University College. To have these teachers trained right here in the North would make it much easier for those school boards who are attempting to recruit staff members in those subject categories.[7]

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[4] Nipissing College, Proposal for a Senior Division Program at Nipissing University College, August 22, 1989, p. 1.

[5] Nipissing College, Response to OCUA Request for Additional Information, November 8, 1989, p. 2.

[6] Laverne Smith, Perspectives on Teacher Supply and Demand in Ontario, 1988-2008, Ministry of Education, Ontario, 1988, p. 44.

[7] Letter from Mr. Brian D. Giroux, Director of Education, The Roman Catholic Separate School Board, District of Nipissing, November 22, 1989.

Support for the program was also evidenced by a letter from The East Parry Sound Board of Education which indicated to the Committee:

> The timing of this proposal is most propitious since the challenges of supply and demand currently facing Boards of Education in the elementary panel will soon be transferred to the secondary panel. In addition, Northern Boards of Education will be looking to agencies such as the Faculty of Education for assistance in the development and implementation of in-service programs at particularly the senior level as they seek to address the implications of secondary program and organizational change.[8]

With respect to the anticipated student demand for the program, Nipissing points to the considerable demand for places within the English language Faculties of Education, which will permit Nipissing to choose the appropriate number of students for the program and be precise in the number admitted. Nipissing indicates that the English language programs in Faculties of Education are under pressure to increase their student intake; currently there are approximately 4 qualified applicants for every position in the English language faculties in Ontario.[9] More specifically, in 1989, 10,395 students applied for existing Intermediate/Senior programs and there were places for only 1,240 of these students. This suggests over an 8:1 ratio of applicants to positions available at the Senior level.[10] Nipissing suggests that the proposed program will not be large enough to impinge upon the volume of applicants at other institutions, however, it will likely attract more candidates into the region.[11]

Based on the Committee's consideration of future societal need for graduates of the proposed pre-service education program in the senior division, the subject areas of science, physics, chemistry, mathematics, computer science and French as a second language appear to be of long-term societal need. The Committee would suggest that Nipissing be mindful of these needs in its selection of subject areas to be offered each year and in the hiring of additional faculty.

The Academic Advisory Committee is satisfied that there is a student demand and a societal need for this program.

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8. Letter from Mr. Douglas G. Yarranton, Director of Education, The East Parry Sound Board of Education, November 13, 1989.

9. Nipissing College, Proposal for a Senior Division Program at Nipissing University College, August 22, 1989, p. 9, s. 5.2.

10. Nipissing College, Response to OCUA Request for Additional Information, November 8, 1989, p. 2.

11. Ibid., p. 9.

7. Uniqueness

The Senior Division would not be unique, however, Nipissing is the only Faculty of Education in the Province not currently offering senior qualifications in the pre-service and in-service program. The Mid-northern and Northeastern areas are, therefore, the only part of the province without service in the senior division.

The Academic Advisory Committee is satisfied that since the program will offer subject specialties of particular need to the region, and because the program would meet a regional and academic need for senior qualifications in the Mid-north and Northeastern regions of Ontario, the duplication of existing programs is justifiable.

8. Local and Regional Support for the Program

Letters from regional school boards indicate support for the proposed program. Comments from OADE indicated that they have "no serious concerns about the proposal". COU comments were generally supportive so long as the program was flexible relative to the duration and size of the demand.

The Committee notes that the use of adjunct faculty will provide the program with the necessary flexibility to adjust to the level of societal need and student demand.

9. Institutional Appropriateness

Nipissing College currently offers one year consecutive BEd programs in the Primary/Junior and Junior/Intermediate divisions. Nipissing will have between nine and twelve persons out of a qualified faculty of fourteen, available annually to deliver the senior program. Adjuncts would be used to deliver some of the Senior curriculum subjects, however, regular full-time faculty would teach 80% of the total program.

The results of an informal survey, conducted by the Committee, of the Faculties of Education in the Ontario university system revealed that the delivery of all BEd programs involve the use, to varying degrees, of non-tenure or non-tenure-track, part-time teaching staff. The Committee is satisfied that there are advantages to be gained through the use of part-time, or "adjunct" staff who are working in the field since they provide the program with flexibility and provide the students with close contact with the field and a practical perspective on the profession. However, the Committee wishes to note that the disadvantages associated with the use of "adjunct" faculty include a low commitment to the program, no research commitment, lower academic qualifications than are required of permanent faculty and a lack of continuity. The Academic Advisory Committee is satisfied that in a program such as is proposed, in which 80% of the courses are offered by full-time faculty, there is sufficient protection for students against the disadvantages noted above. However, Nipissing College should strive to maintain a ratio between full-time and "adjunct" faculty in the future which does not fall below this percentage.

The Committee notes all the subject areas requested are already offered at the Intermediate level at Nipissing with the exception of Computer Science.

The Academic Advisory Committee is satisfied that the development of a Senior Division within the Faculty of Education at Nipissing College is an appropriate development.

10. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Education program, Senior Division at Nipissing College, Laurentian University be recommended as eligible for counting.*

Academic Advisory Committee
January 26, 1990

Appendix G

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Computer Engineering (BASc)
University of Toronto

New Undergraduate Professional Program considered for Funding Eligibility

On August 1, 1989, the University of Toronto requested that Council consider for funding eligibility its new undergraduate professional program in Computer Engineering. In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities (COU) which in turn forwarded the program to the Committee of Ontario Deans of Engineering (CODE). Council referred the program, and COU's comments, to its Academic Advisory Committee and asked for specific advice thereon.

The Committee's findings with respect to the program are summarized below.

1. Proposed Curriculum

The proposed program is a joint offering of the Departments of Electrical Engineering and of Computer Science. The curriculum in years I and II is common to the curriculum of the existing Electrical Engineering program. Courses in years III and IV will draw to a large extent upon current offerings in Electrical Engineering and Computer Science.

Courses include computer architecture, organization and design, hardware technology, software technology, digital electronics and microelectronics, computation, robotics and communication and control theory.

The objective of the program is to provide an area of study distinct from both Electrical Engineering and Computer Science which emphasizes three areas:

- the architecture, organization and design of computers and computer systems;
- the hardware technologies with which computers and computer systems are constructed; and
- the software technologies that convert computer hardware into useful tools.

2. Academic Quality

The program was approved by the Academic Board of the University of Toronto on December 1, 1988.

3. Financial Viability

The University of Toronto indicates that financial approval of the program is conditional upon the receipt of Program Adjustment Fund support at the level of $1.8 million, spread over five years, with the University contributing an additional $1 million.

4. Projected Enrolment

The University projects a steady-state average annual number of 60 students per year in the program to be achieved in year one, and increasing over four years to a total steady-state enrolment of 240 students.[1]

5. Co-operation with other Post-secondary Institutions

The University of Toronto has indicated that the proposed program does not entail specific co-operative arrangements with other institutions.

6. Societal Need and Student Demand

With respect to the societal need for graduates of computer engineering programs, recent federal and provincial publications suggest that the need will be high and possibly critical. Job Futures: An Occupational Outlook to 1995 suggests that employment prospects for graduates will be much better than for most occupations both in the field of study and at the managerial level. In fact, the data suggests that the expected demand for graduates between 1988 and 1995 will definitely meet and probably significantly exceed supply.[2]

The University of Toronto points out that should shortages of supply occur, Ontario, which currently employs 49 percent of all electrical engineers and 48 percent of all systems analysts employed in Canada, will experience these shortages more severely than any other region.[3]

The Ontario Task Force on Employment and New Technology also predicted that employment in the natural sciences and engineering would grow at a rate which is considerably higher than average and that the Ontario economy would generate, by 1995, 69,000 new jobs in these fields - over 9% of all new jobs created since 1985. The final report of the Task Force also noted that many industries foresee shortages of electrical engineers and systems analysts in the future.[4]

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[1] University of Toronto, Request for Funding Eligibility: Computer Engineering, Appendix II, "Projected Enrolment and Revenue of Computer Engineering Program", August 1, 1989.

[2] Employment and Immigration Canada, Job Futures; An Occupational Outlook to 1995, 1988-89 Edition, Vol. II, pp. 6, 66-67, 90-91.

[3] University of Toronto, op. cit., p. 5.

An extensive survey of potential employers, conducted by the University of Toronto, revealed a serious concern in the industry that present activities would be disrupted by shortages of computer engineering graduates in the future. The survey revealed strong, widespread support for the program. Bell Northern Research Ltd. and Northern Telecom stated:

> In view of BNR's and Northern Telecom's current concerns that the future supply of highly trained engineers and scientists will likely decrease in the coming years, we strongly support initiatives which will increase the supply in one of Canada's strategic areas. Your proposed program would increase the available numbers of computer engineers graduating in Ontario by almost 50 percent and this is positive...Our current appetite is clearly increasing and I see no reason why this trend should not continue into the future.
>
> As our business becomes more software-intensive, computer engineers will play an increasingly important role as their background includes the fundamentals of both computer science and electrical engineering.[5]

The concern regarding an imminent shortage of qualified graduates in this field was echoed by many respondents, including Digital Equipment of Canada Limited which commented:

> Aside from the merits of the program as a source of graduates with the optimum training for our needs, our current experience is that well qualified people are still in short supply. Indeed, all the evidence that I am aware of suggests that this is a chronic shortage experienced by all of the computer industry... I do not believe that [your program] will lead to any surplus of people with these qualifications.[6]

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[4] Ibid., pp. 5-6, citing from "Employment and New Technology", Final Report, Ontario Task Force on Employment and New Technology, Government of Ontario, 1985.

[5] Letter from T.M. Hennebury, Vice-President, Human Resources and Administration, Bell-Northern Research Ltd., June 21, 1989.

[6] Letter from E.A. Seaman, External Research Manager, Digital Equipment of Canada Limited, June 30, 1989.

Organizations planning to increase their future activities, such as Hewlett-Packard (Canada) Ltd. are particularly concerned that the supply of computer engineering graduates be augmented by the Toronto program:

> In general, there is a great deal of concern within the "high tech" community, that there will not be sufficient technical graduates in the mid 1990's to meet our hiring needs... We will be hiring about 350 individuals over the next five years that would have electrical engineering, computer science or computer engineering backgrounds. About 30 to 50% of these hires would come to us directly from University. It should be noted that about 150 of these hires will be replacements for people that terminate with Hewlett-Packard and, as such, they do not represent a net additional need to the Canadian workforce.
>
> ...The fact that these graduates would come from Toronto is possibly helpful since 40% of our employee base is in the greater Metropolitan Toronto area...[7]

The following additional employers also provided evidence of strong support for the program and a need within their organizations for program graduates: Atomic Energy of Canada Limited, Bell Canada, The Coopers and Lybrand Consulting Group, Honeywell Limited, IBM Canada Ltd., The ITRC: Information Technology Research Centre and the Motorola Information Systems.

The University of Toronto indicates that the expectation for admission and retention of 60 students per year of the program is quite realistic given that demand for admission to engineering programs in Ontario is generally high. The University notes that in each of the past three years, demand for admission from Grade 13 has been growing and the actual capacity of the system to accommodate registrants in relation to all applicants has been only 52.6%.[8] Toronto states that it can only increase their enrolments by adding new program capacity.

The University also indicates that the demand for places in Electrical Engineering has greatly exceeded the number of places available for the past several years, noting that there have been approximately ten applicants for each available space between 1983 and 1988. As a result, Toronto observes that admission standards have been unreasonably high over the same period, with the average entering mark for Ontario Grade 13 students being 90%. The University is,

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7. Letter from Mr. John E. Cross, Director of Human Resources, Hewlett-Packard (Canada) Ltd., June 30, 1989.

8. University of Toronto, op. cit., p. 3.

therefore, confident that sufficient student demand exists to meet the projected enrolment levels.

The Academic Advisory Committee is satisfied that there exists both societal need and student demand for the Computer Engineering program proposed by the University of Toronto.

7. Uniqueness

Given the evidence of strong societal need and student demand for the proposed program, and the fact that it will be the only program serving the Toronto area, the Academic Advisory Committee is convinced that any duplication of existing computer engineering programs at McMaster, Queen's, Waterloo, Ottawa or Carleton universities is justifiable.

8. Local and Regional Support for the Program

Letters written in support of the need for this program suggest that local and regional support is strong. CODE supports the introduction of this program, noting that there is a very strong demand for graduates in computer engineering.

Despite their support for the proposal, both COU and CODE noted that smaller engineering faculties in Ontario have expressed concern that the establishment of the proposed program may reduce their first-year enrolments.

The Committee, in light of the evidence of student demand for this type of program, employment opportunities for graduates, and the regional need met by the existing programs, does not believe that the introduction of this program will jeopardize the viability of existing programs in the system.

9. Institutional Appropriateness

The proposed program is based on areas of existing strength to the doctoral level in electrical engineering and computer science at the University of Toronto. The Committee is satisfied that it is appropriate for the program to be offered at the University of Toronto, only when and if the necessary financing is obtained by the University to ensure the program's financial viability.

10. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Engineering program in Computer Engineering at the University of Toronto be recommended as eligible for counting only upon verification that the University of Toronto has*

obtained those funds necessary to ensure the financial viability of the program, as stated in this report.

Academic Advisory Committee
November 20, 1989

Appendix H

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Health Studies (BA Ordinary)
York University

New Undergraduate Quasi-professional Program considered for Funding Eligibility

On July 31, 1989, York University requested that Council consider for funding eligibility its new undergraduate quasi-professional "ordinary" program in Health Studies. In accordance with established procedures, Council circulated the program proposal to the Council of Ontario Universities (COU). The program was also circulated to the Ontario Ministry of Health for review and comment. The proposal and external comments were referred by the Ontario Council on University Affairs to the Academic Advisory Committee for their specific advice thereon.

The Committee's findings with respect to the program are summarized below.

1. Proposed Curriculum

The proposed BA (Ordinary) program in Health Studies would be offered by Atkinson College at York University, which specializes in continuing education, part-time study and serving mature students. The program is based on a Health Studies theme introduced into the BA Liberal Studies program in 1986-87. The program consists of 15 courses including 5 full courses from selected Health Studies related disciplines, 4 general education courses, and 6 elective courses.[1] A maximum of 7 full course credits (or equivalent) may be granted for work completed toward a diploma or certificate program at a Community College.[2]

York indicates that the aim of the program is "to provide students with a broad university education which will enable them to respond to the existing and changing health needs of the society".[3] Required courses include Research Methods in Health Studies, Health Ethics, Conceptual Models of Health, Foundations of Health Care

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[1] York University, Response to OCUA Request for Additional Information, December 15, 1989, p. 1.

[2] Ibid., Attachment 2, "Section 5 : Community College Advanced Standing Policy"

[3] York University, Request for Funding Eligibility: B.A. (Ordinary) Health Studies, July 31, 1989, p. 1 (Part 2).

Assessment and Planning, Issues in Health Care Assessment and Planning, and one of the following: Medical Sociology, Sociology of Women's Health Care, Medical Geography, Geography of Nutrition or Geography of Health Care Systems.

2. Academic Quality

The program was approved by the Senate of York University on February 5, 1988.

3. Financial Viability

York University indicates that Senate approval confirms the adequacy of the University's resources with respect to library holdings, physical space, support staff and funding to mount the program.

4. Projected Enrolment

York University indicates that all of the students enroled in this program will be mature part-time students. The University projects a steady-state annual intake into first year of 250 to 300 students with an eventual 650 to 700 students enroled and taking courses in the program annually.

5. Co-operation with other Post-secondary Institutions

No inter-university co-operation was indicated.

6. Societal Need and Student Demand

York University states that the objective of the proposed program is to serve

> a demonstrated, stated, and growing need for expanded health education, in direct response to requests from the nursing profession...[4]

and that

> the program is being proposed...in direct response to requests from nursing organizations for part-time degree studies to allow professionals to upgrade and broaden their education; consultation with nursing organizations over the past several years has indicated there is a great need for degree studies which emphasize community health, management and counselling, public education, health care policy and development, and health administration, skills which are becoming critical in the shift toward health promotion and administration and which

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[4] York University, op.cit., December 15, 1989, p. 2.

> are complementary to primary nursing education which stresses clinical practise.[5]

The Academic Advisory Committee, noting that the primary clientele to be served by this program appeared to be within the nursing profession, forwarded copies of the York proposal to both the Registered Nurses' Association of Ontario (RNAO) and the Canadian Nurses Association (CNA) for review. These organizations, representing the nursing profession, were asked to comment on the societal need for graduates with an education of this nature and advise the Committee with respect to their perception of the origin, size and duration of the student demand for the program.

Neither organization indicated support for the proposed program in terms of societal need or student demand. The RNAO responded as follows:

> RNAO recognizes that York University has a history of innovation and accessibility. We are also aware of the large population of nurses seeking degree credit courses. As the professional association, our policy is to encourage the development of nursing baccalaureate programs. Thus, it would be inappropriate for us to comment on the proposed BA curriculum. However, we do encourage and support the work underway at York University with regard to development of a baccalaureate in nursing program.[6]

The Canadian Nurses Association provided the Committee with more extensive feedback:

> The Association began by reviewing the content and its relevance to the expressed aims of the Canadian Nurses Association (CNA) in relation to education for nurses. We are disappointed to find that the content will not meet the career needs of practising nurses. As you may be aware, early in this decade the CNA, after considerable study, publicly stated that nurses who enter the profession in the year 2000 should enter through the university nursing baccalaureate program. This need for higher education was based on the increasing complexity of the health care system and the need for an education program with significant social and biological science content. I believe that the Registered Nurses Association of Ontario had discussed the possibility of a nursing

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5. Ibid., pp. 2-3.

6. Letter to OCUA from Ms. Judy Watts, RN, Executive Director, Registered Nurses' Association Ontario, December 14, 1989.

> program with officials at York University however, there appears to have been little or no consultation involved in the proposal which you have forwarded to us for review.
>
> It is not clear what category of worker is being prepared by this program, and what type of employment they are being prepared for. A generalist degree with no health care related competency does not assist students to find employment, and does not form part of a career path. We are also concerned that if this course is offered, nurses could consider it appropriate, and later find that the qualification is not recognized in competition for advancement in nursing.[7]

The Academic Advisory Committee also forwarded the proposal to the Ontario Hospital Association (OHA) for comment in order to obtain a broader perspective on the need and demand for the program. The OHA did not identify a societal need for the program, stating:

> While many health care professionals desire a university degree, there is little evidence to suggest that the degree of choice is the one being proposed. The B.A. (Ordinary) program in Health Studies does not address the issue of the supply of health professionals in relation to the industry's current needs.[8]

It is the interpretation of the Academic Advisory Committee that there is a paucity of societal need for this program expressed by the primary profession it would purportedly serve. The Academic Advisory Committee is not satisfied that the health care professionals who would, in large numbers, be encouraged to enrol in this program would have a reasonable chance of enhancing their career opportunities. Although it may be the case that many nurses would be attracted to the program, the Committee is not convinced that the program would provide a basis for actual career advancement.

Although the Committee did receive two letters of support for the program[9], the Committee notes that the societal needs expressed in these letters could be adequately met by York University's existing Bachelor of Administrative Studies Program - Health Administration Option or by the existing Health Studies theme within the BA Liberal Studies program.

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[7] Letter to OCUA from Ms. Judith Oulton, Executive Director, Canadian Nurses Association, December 15, 1989, p. 1.

[8] Letter from the Ontario Hospital Association, January 18, 1990.

[9] Letters received from the Canadian College of Health Service Executives and the Sunnybrook Medical Centre (provided by York University).

The Academic Advisory Committee further notes that comments received about the program from COU reflected concerns regarding the possible lack of job opportunities for graduates, that the program should not be viewed by diploma nurses as a viable alternative to post-RN clinical teaching, and that it would not meet the CNA proposed requirement of a Bachelor's degree in Nursing for entry to practice and therefore might not be attractive to the nursing profession.[10]

It is the opinion of the Academic Advisory Committee that the societal need for the proposed BA (Ordinary) program in Health Studies has not been satisfactorily established.

7. Funding Recommendation

As the program does not meet, in the Committee's opinion, all of Council's funding criteria for new undergraduate programs, the Academic Advisory Committee, therefore, recommends to the Ontario Council on University Affairs that:

> *enrolment in the Bachelor of Arts (Ordinary) program in Health Studies at York University not be recommended as eligible for counting.*

Academic Advisory Committee
December 18, 1989

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[10] Council of Ontario Universities, November 14, 1989.

89-X Graduate Program Funding 1990-91

1.0 Introduction

In this Memorandum the Ontario Council on University Affairs continues the practice of submitting annual advice on the funding of new and existing graduate programs as initiated in Advisory Memorandum 83-VIII.

The graduate program funding approval process was developed to achieve Council's objectives for the graduate enterprise in Ontario[1] and to achieve Council's system-wide goals of institutional role differentiation and system rationalization. Council bases its annual funding advice on new programs on the four criteria contained in Advisory Memorandum 89-V.[2] Briefly, each program must have passed a rigorous academic appraisal, as certified by the Council of Ontario Universities, without requiring any improvement; the university must demonstrate a societal need and student demand for the program; the program must be consistent with the aims, objectives and existing strengths of the institution offering it and be included in the institution's five-year graduate plan; and, Council must deem the program to be an appropriate development within the Ontario university system.

With respect to existing programs, Council relies upon the Council of Ontario Universities' identification of programs of poor quality through the periodic appraisal process conducted by the Ontario Council on Graduate Studies. Council will recommend that funding eligibility be withdrawn from all programs identified to be of unacceptable quality through this process.

Council continues the practice of recommending a weight for each graduate level-one program. All graduate level-two programs, as outlined in the Ministry's Operating Formula Manual, will be in Category 8 with a weight of 6, or 2 per term.

2.0 New Graduate Programs

Council has reviewed the advice of its Academic Advisory Committee regarding the funding eligibility of the following eight new graduate programs:

University of Guelph:

Master of Arts in Drama (MA) - See Appendix A

Doctor of Philosophy in Applied Mathematics and Applied Statistics (PhD) - See Appendix B

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[1] See Ontario Council on University Affairs, "Advisory Memorandum 89-V: Graduate Program Planning and Funding in the Third Quinquennium, 1989-90 to 1993-94", p. 18.

[2] Ibid., pp. 25-26.

Doctor of Philosophy in Geography in Rural Resource Evaluation and Environmental Analysis (PhD) - See Appendix C

Doctor of Philosophy in Resource and Environmental Economics (PhD) - See Appendix D

University of Ottawa:

Master of Engineering in Engineering Management (MEng) - See Appendix E

University of Toronto:

Master of Information Science (MIS) - See Appendix F

Wilfrid Laurier University:

Doctor of Social Work (DSW) - See Appendix G

York University:

Master of Science in Computer Science (MSc) - See Appendix H

3.0 Recommendations

The evidence provided in the appended reports of the Academic Advisory Committee clearly indicates a significant societal need for the graduates of the programs proposed for funding eligibility and satisfies Council that there exists demonstrable academic strength at the institutions within which they have been proposed. After consideration of the Academic Advisory Committee's advice and of the broader context of system-wide planning considerations, Council is satisfied that the proposed programs are appropriate developments within the Ontario university system.

Accordingly, Council *recommends to the Minister:*

OCUA 89-60
ELIGIBILITY OF ENROLMENT IN THE MASTER OF ARTS IN DRAMA PROGRAM AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Master of Arts program in Drama at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91 -the program to be in Category 6 with a weight of 3 or 1 per term, as outlined in the Ministry's Operating Formula Manual.

OCUA 89-61
ELIGIBILITY OF ENROLMENT IN THE DOCTOR OF PHILOSOPHY PROGRAM IN APPLIED MATHEMATICS AND APPLIED STATISTICS AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Doctor of Philosophy program in Applied Mathematics and Applied Statistics at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91.

OCUA 89-62
ELIGIBILITY OF ENROLMENT IN THE DOCTOR OF PHILOSOPHY PROGRAM IN GEOGRAPHY IN RURAL RESOURCE EVALUATION AND ENVIRONMENTAL ANALYSIS AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Doctor of Philosophy program in Geography in Rural Resource Evaluation and Environmental Analysis at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91.

OCUA 89-63
ELIGIBILITY OF ENROLMENT IN THE DOCTOR OF PHILOSOPHY PROGRAM IN RESOURCE AND ENVIRONMENTAL ECONOMICS AT THE UNIVERSITY OF GUELPH FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Doctor of Philosophy program in Resource and Environmental Economics at the University of Guelph be counted as eligible BIUs for funding purposes beginning in 1990-91.

OCUA 89-64
ELIGIBILITY OF ENROLMENT IN THE MASTER OF ENGINEERING PROGRAM IN ENGINEERING MANAGEMENT AT THE UNIVERSITY OF OTTAWA FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Master Engineering program in Engineering Management at the University of Ottawa be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 7 with a weight of 4 or 1.333 per term, as outlined in the Ministry's Operating Formula Manual.

OCUA 89-65

ELIGIBILITY OF ENROLMENT IN THE MASTER OF INFORMATION SCIENCE PROGRAM AT THE UNIVERSITY OF TORONTO FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Master of Information Science program at the University of Toronto be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 6 with a weight of 3 or 1 per term, as outlined in the Ministry's Operating Formula Manual.

OCUA 89-66

ELIGIBILITY OF ENROLMENT IN THE DOCTOR OF SOCIAL WORK PROGRAM AT WILFRID LAURIER UNIVERSITY FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Doctor of Social Work program at Wilfrid Laurier University be counted as eligible BIUs for funding purposes beginning in 1990-91.

OCUA 89-67

ELIGIBILITY OF ENROLMENT IN THE MASTER OF SCIENCE PROGRAM IN COMPUTER SCIENCE AT YORK UNIVERSITY FOR FUNDING PURPOSES IN 1990-91

THAT enrolment in the Master of Science program in Computer Science at York University be counted as eligible BIUs for funding purposes beginning in 1990-91 - the program to be in Category 7 with a weight of 4 or 1.333 per term, as outlined in the Ministry's Operating Formula Manual.

4.0 Existing Graduate Programs

Council has reviewed the Council of Ontario Universities/ Ontario Council on Graduate Studies annual Report to the Ontario Council on University Affairs on Appraisal Results: 1988-89. This report indicates that one program was placed in the

NOT APPROVED category (category "d"): Doctor of Philosophy in Industrial Engineering (PhD), University of Windsor.

Since the Council of Ontario Universities has verified that this program is not of acceptable academic quality, Council recommends that funding eligibility be withdrawn.

Accordingly, Council *recommends to the Minister:*

OCUA 89-68
ELIGIBILITY OF ENROLMENT IN THE DOCTOR OF PHILOSOPHY PROGRAM IN INDUSTRIAL ENGINEERING AT THE UNIVERSITY OF WINDSOR FOR FUNDING PURPOSES

THAT enrolment in the PhD program in Industrial Engineering at the University of Windsor, not be counted as eligible BIUs for funding purposes.

Dr. H.V. Nelles
Chairman

February 16, 1990

Appendix A

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Master of Arts in Drama (MA)
University of Guelph

New Graduate Program Considered for Funding Eligibility

On July 25, 1989, the University of Guelph requested that Council consider its new Master of Arts program in Drama for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on March 17, 1989, this program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies and, at the time of appraisal, did not require any improvements.

2. Societal Need and Student Demand

The Master of Drama program at Guelph is a one year program focusing primarily on Canadian drama and theatre with a supporting focus on 19th and 20th century drama and theatre generally.

The societal need for this program was demonstrated to be overwhelming for a variety of reasons by numerous letters of support from local and regional theatre groups and professionals.

A representative of the Elgin and Wintergarden Theatre project in Toronto stated that the proposed program is needed because it will meet a demand for scholarly research:

> In my professional experience we have seen that there is clearly a growing demand for research and scholarly studies in drama in this country and it is imperative that there be a healthy and competitive alternative to the University of Toronto M.A. Program in Drama in Ontario. The University of Guelph provides the ideal alternative not only

> because of its scholarly resources, but also because of its locale....[1]

Others indicate that the program will further the preservation and understanding of our cultural history:

> Over the last two decades, there has been an enormous growth in the concern we have begun to show in this country generally and this province particularly in our cultural history. We have only recently begun to understand the importance of documenting and analyzing it. It seems to me that this new program will go far in helping to meet those needs.[2]

Christopher Newton, of the Shaw Festival, notes that the University of Guelph has already established strong links with the industry which will facilitate the interpretation and assessment of Canadian theatre:

> The Guelph Drama Department has forged strong links with the professional theatre in the country - something that no other drama department has done on such a scale or with such enthusiasm. The professional theatre needs scholars as well as craftspeople. Interpretations have themselves to be interpreted and assessed in order to further the long term goals of the theatre.[3]

The Director of the Drama and Theatre Program at McGill University notes the proposed program will meet a national need for additional opportunities to study drama in Canada:

> There are, ...far too few MA programs in Drama in Canada: after suggesting Toronto and perhaps UBC to our drama graduates here, I am hard pressed to make other suggestions, and indeed wind up suggesting that they go abroad to Europe or perhaps the United States.[4]

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1. Letter from Janis Barlow, Project Manager, The Elgin and Winter Garden Project, July 11, 1989.

2. Letter from Don Rubin, Executive Editor, World Encyclopedia of Contemporary Theatre, July 12, 1989.

3. Letter from Christopher Newton, Shaw Festival Theatre Foundation, Fall 1989.

4. Letter from Denis Salter, Director, Drama and Theatre Program, McGill University, July 7, 1989.

Numerous additional letters written in support of the need for graduates of the program indicated that there are a significant number of employment opportunities for graduates of this program to obtain practical work in the performing arts if they do not choose to continue on to doctoral study and university teaching. Students are expected to find employment as teachers, researchers, critics, and theatre workers in the capacities of dramaturg, art administrator, educational consultant, publicist, stage manager, literary manager, artistic director, designer, performer and occasionally as director.

Guelph indicates that the program will not duplicate either the Master's of Fine Arts program offered at York University or the MA program in Drama offered by the University of Toronto.

A representative of York University indicates that the Guelph program is unique and will clearly fill a special need,[5] noting further that

> York's graduate program is oriented towards theatre practice (as opposed to drama scholarship), geared to advanced study in acting, directing, playwriting, etc. Toronto's Centre for Drama is closer to Guelph's proposed orientation, but there are significant differences. The most important of these is Guelph's emphasis on Canadian drama and theatre, an area of expertise not really offered by the Centre for Drama. Guelph boasts both a graduate faculty especially renowned in Canadian drama scholarship and a superb Canadian Theatre Archive, a rich treasure-trove of research information--these two factors alone place Guelph in a unique category for the study of Canadian theatre.[6]

Dr. Leonard E. Doucette of the Department of French and Graduate Centre for Study of Drama at the University of Toronto also indicates that the program is unique:

> I have examined with great interest the course descriptions and general aims of the programme provided to me...This new programme is unique and very well conceived. It will meet a fundamental societal need: the conservation, enlightened analysis and careful nurturing of an integral component of the cultural heritage of this province and this nation. While hewing to classical standards for graduate study, it will meet that need in a novel and challenging way.[7]

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[5] Letter from Professor Hersh Zeifman, Department of English, York University (undated).

[6] Ibid.

[7] Letter from Dr. Leonard E. Doucette, Professor, Department of French and Graduate Centre for Study of Drama, University of Toronto, July 14, 1989.

The University of Toronto's commitment to Canadian theatre is in fact fairly limited. The Graduate Centre for Study of Drama indicates that its main emphasis is on doctoral work, and it tends to consider its MA program chiefly as a testing and winnowing ground for further graduate research.[8]

Demand for the program appears strong. The target enrolment level of six students for the Fall of 1989 was met with very little advertisement of the program. The University of Guelph anticipates no difficulty in attaining the projected enrolment level of 12 students for the Fall of 1990 nor the steady-state enrolment level of 15 students in 1991.

The University indicates that demand will come primarily from BA honours graduands, particulary students from the Guelph's Honours Drama program.

The Academic Advisory Committee is convinced of the societal need and student demand for the proposed program.

3. Consistency with Aims, Objectives and Existing Strengths

Guelph has offered an undergraduate program in drama since 1967, and established a drama department in 1973 which made available general and honours specializations. The program is based upon this existing strength and has been included in the University's five-year graduate plan since 1987.

The University of Guelph has significant special strengths, such as an extensive collection of Bernard Shaw papers, which make it an ideal location for the offering of the proposed program. These special strengths were frequently noted in the letters written in support for the need for this program. For example a letter reviewed by the Committee from Dr. Bessai, of the University of Alberta, commented specifically on Guelph's academic and research strength in the field of drama:

> As a specialist in Canadian drama and theatre history from another region of the country...I have been astonished by the scholarly enterprise of this department on several counts.
>
> ...[they have been engaged in] the assiduous collecting of the archives of Ontario theatres, both mainstream and alternative, past and present...I can fully appreciate the convenience the University of Guelph now offers in terms of preservation and accessibility of this important material; without doubt the present level of the Canadian theatre collection will attract future depositors as well. The opportunities these papers provide for primary research at the M.A. level is invaluable. That Canadian theatre and drama have become entirely serious and important academic studies in recent years hardly needs reiteration. In my

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[8] Letter from Ronald Bryden, Director, Graduate Centre for Study of Drama, University of Toronto, June 6, 1989, p. 1.

> experience, that students are becoming increasingly aware of the opportunities for seminal research in these fields is also the case.[9]

Dr. Bessai continues, noting the appointment of "well-known younger academics with excellent reputations throughout Canada for teaching, scholarship and publication" to complement the group of established scholars already in the departments of Drama and English and the numerous publication projects in Canadian theatre and drama emerging from the University of Guelph.[10]

Further, the Executive Director of the Playwrights Union of Canada indicates

> I could not imagine a scholarly environment more rich in pertinent research and resource material, or such opportunities to study with working professionals of the genre, than within the Guelph program.[11]

The Academic Advisory Committee is satisfied that the Master of Arts in Drama program, focusing as it does on Canadian drama and theatre, is consistent with the aims, objectives and existing strengths of the University of Guelph.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that

> *enrolment in the Master of Arts program in Drama at the University of Guelph be recommended by Council for funding eligibility.*

Academic Advisory Committee
November 20, 1989

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[9] Letter from Dr. Diane E. Bessai, Professor of English, University of Alberta, July 10, 1989.

[10] Ibid.

[11] Letter from Gay Revell, Executive Director, Playwrights Union of Canada, July 1989.

Appendix B

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Doctor of Philosophy in Applied Mathematics and Applied Statistics (PhD)

University of Guelph

New Graduate Program Considered for Funding Eligibility

On July 25, 1989 the University of Guelph requested that Council consider its new Doctor of Philosophy program in Applied Mathematics and Applied Statistics for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on May 19, 1989, this program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies and, at the time of appraisal, did not require any improvement.

2. Societal Need and Student Demand

The University of Guelph indicates that the objective of the program is "to offer opportunities for advanced research in the fields of Applied Mathematics and Applied Statistics, including the interface between these two."[1] In Applied Mathematics, the areas of specialization include dynamical systems, mathematical biology, and numerical analysis and operations research. The major areas of specialization in Applied Statistics include linear and nonlinear models, survival analysis, life testing and reliability, and bioassay. Research is to be focused upon specific real-world situations, arising in a biological or veterinary science setting.

The University of Guelph argues that the use of applied mathematics and applied statistics expertise has dramatically increased in agriculture, biology, physics, chemistry, engineering and medicine. Growing interest in biotechnology and toxicology have further increased the need for applied mathematics and applied statistics expertise.

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[1] University of Guelph, College of Physical Science and Faculty of Graduate Studies, Doctor of Philosophy (PhD) in Applied Mathematics and Applied Statistics : Request for Formula Funding Support, July 21, 1989, p. 3.

The National Science and Engineering Research Council (NSERC) forecasts that this need will continue to grow. Guelph notes that the NSERC report Ten Years to 2000: A Strategy Document states:

> ...beginning in the early 1990's, there will be a marked increase in demand from both sectors for postdoctoral graduates in science and engineering. This rise in demand means that all three research-active sectors - private industry, university and government laboratories - will be competing for a relatively small number of highly skilled personnel at the same time.[2]

Guelph indicates that the proposed program will provide graduates capable of meeting this need.

Guelph suggests that the replacement of retiring faculty will create another area of employment opportunities for program graduates. The age profile of Canadian university mathematics faculty indicates that beginning in the next five years, a steady series of faculty retirements will sharply increase the need for new, young faculty in this discipline. Statistics provided by the University of Guelph, analyzing the requirements of tenure-track faculty positions advertised in the CAUT Bulletin between September 1988 and June 1989 revealed that already over half the mathematics positions advertised are in the areas of applied mathematics (41%) and applied statistics (17%).

Further evidence of the need for graduates is provided by the demand for the services of the Department's Mathematics and Statistics Clinic, a unique university-industry interface vehicle established in 1981. The Clinic acquires contracts from industry, business, and government which entail theoretical studies involving mathematical and statistical modelling. The Clinic will provide doctoral students with thesis problems. The Clinic's Statistical Consulting Service will employ statistics graduate students, and will provide them with hands-on experience through a graduate consulting course.[3]

The Committee was provided with numerous examples of positions within government and industry which require applied mathematics and/or applied statistics expertise at the doctoral level.[4] Comments provided by Whiteshell Research, Manitoba, strongly support the need for this program:

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[2] University of Guelph, Revised: Doctor of Philosophy (PhD) in Applied Mathematics and Applied Statistics - Request for Formula Funding Support, November 14, 1989, p. 9

[3] Ibid., p. 10.

[4] Ibid., Appendix B "Employment Demand in Industry and Government".

> ...a major component of much of our R&D involves applying mathematics to do elaborate computations, modelling and analysis of a wide variety of scientific and engineering problems. Many millions of dollars of R&D over the next decade and beyond will ride on applied mathematics of this nature and the results have major bearing on the world of the future...
>
> Hitherto our modelling specialists have acquired their mathematical skills "on the run" from whatever grounding their science or engineering discipline has provided. Your Ph.D. program is new and unique, so far as I know, in providing that learning experience ab initio, in a tutorial environment and in greater depth and scope. Your graduates will bring a new focus and strength to the work they will find in industry. I hope to meet some of them in due course at work for AECL.[5]

Although there are eight other doctoral mathematics/statistics programs offered within the Ontario university system, it appears, based on meetings between the University of Guelph and representatives of the existing programs, and on the Academic Advisory Committee's own consultation of these departments, that the University of Guelph program is unique in many respects. Nowhere else is there such a strong link between mathematics/statistics and the life sciences, biological sciences or veterinary sciences, except at the University of Toronto which works closely with the medical sciences, and therefore is not directly duplicative of the Guelph program. Since the Committee has been assured by the University of Guelph that it will emphasize the unique aspects of their program, the Academic Advisory Committee is confident that this program will produce a net increase in the number of doctoral graduates in applied mathematics and statistics available to meet the societal needs identified above.

Student demand for this program appears to be quite strong. The University of Guelph indicates that it received over 55 enquiries about the program even before it had been formally advertised. Applications for 1990 are numerous, although Guelph notes, as have many other universities with doctoral programs, that many, many of the applications come from Visa students, especially from China. Macroindicator data shows student demand for doctoral programs in mathematics and statistics generally to have increased 26% between 1983 and 1987.[6]

The first four students enroled in the Guelph program in the Fall of 1989 (3 full-time and 1 part-time). All four of these students are Canadians or landed

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5. Letter from Mr. Michael Tomlinson, B.Sc., FCIC, Manager, Business Development Office, Whiteshell Research, Pinawa, Manitoba, October 24, 1989, pp. 1 - 2.

6. Council of Ontario Universities, Ontario Council on Graduate Studies, Macroindicator Data, 1987-88.

immigrants. The University projects an intake of three to four new students per year and an eventual steady-state enrolment of eight to twelve full-time students in residence at one time. Given the strong student demand for this program, Guelph does not anticipate any problem in meeting these projections.

The Academic Advisory Committee is satisfied that there is convincing evidence of societal need for this program and that there will be sufficient student demand.

3. Consistency with Aims, Objectives and Existing Strengths

The Academic Advisory notes that the University of Guelph has in place the necessary facilities and faculty resources to offer this program and has a solid base of related strength in the field of applied mathematics and applied statistics. The Committee also understands that the University of Guelph has some of the most up-to-date computer equipment of any similar department.[7]

The Committee notes that the life-science orientation of the program is extremely appropriate in light of the University's existing strengths in biologically-oriented research, veterinary medicine, agriculture, hotel and food administration, consumer studies, toxicology, land resource science, and landscape architecture.

The University of Guelph has offered a unique Master of Science program emphasizing applied mathematics and statistics since 1968. This program received a rating of "good quality" from the Ontario Council on Graduate Studies in 1988.

The University of Guelph also operates a Mathematics and Statistics Clinic which gains contracts from industry, business and government which require theoretical studies using mathematical and statistical modelling.

The program is consistent with the emphasis on applied research promoted in the University's aims and objectives document and the program was included in the University of Guelph's five-year graduate plan in 1988.

The Academic Advisory Committee is satisfied that this program is consistent with the aims, objectives and existing strengths of the University of Guelph.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that:

> *enrolment in the Doctor of Philosophy program in Applied Mathematics and Applied Statistics at the University of Guelph be recommended by Council for funding eligibility.*

Academic Advisory Committee
December 18, 1989

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[7] University of Guelph, op.cit., p. 11.

Appendix C

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Doctor of Philosophy in Geography (PhD) in Rural Resource Evaluation and Environmental Analysis

University of Guelph
New Graduate Program Considered for Funding Eligibility

On June 21, 1988, the University of Guelph requested that Council consider its new Doctor of Philosophy program in Geography in the fields of Rural Resource Evaluation and Environmental Analysis for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on April 22, 1988, the program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies. The Academic Advisory Committee notes that the Ontario Council on Graduate Studies requires a report on the development of the program to be submitted by January 1, 1991.

The Committee has reviewed the requirements of the report[1] with the University and is satisfied that the program meets Council's first criterion.

2. Societal Need and Student Demand

The proposed PhD program in Geography is restricted to the fields of Rural Resource Evaluation and Environmental Analysis. Within these fields, three areas of specialization are available: Biophysical Resources, Rural Socio-Economic Resources and Resource Assessment. The proposal is a direct extension of the department's Master's programs.

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[1] Letter of March 21, 1988 from Dr. Maurice Yeates, Executive Vice-Chairman, OCGS to Dr. D.P. Ormrod, Dean Faculty of Graduate Studies, University of Guelph.

The unifying theme in this program is the focus upon integration and evaluation as applied to the assessment of biophysical systems with respect to socio-economic systems and the evaluation of socio-economic phenomena with respect to biophysical processes.[2]

Evidence provided by the University of Guelph indicate that universities, public agencies and private corporations are in the process of seeking individuals to fill positions for which graduates of the proposed program would be qualified. Specific positions were recently advertised for professors within geography departments in Ontario and Quebec, for analysts within Environment Canada, and within CIDA, Statistics Canada, and the National Center for Atmospheric Research, Colorado.

The University of Guelph's experience with direct, personal recruitment on campus suggests that a steady, private sector, demand exists for individuals with advanced training in various areas of resource management and analysis. Guelph argues further that the need to address integrative resource and environment issues has only recently been fully recognized by the private sector, suggesting that the demand for an advanced level of expertise from this sector will continue to grow.

However, Guelph indicates that the greatest non-academic demand for graduates of the proposed program will continue to be from government and government-related organizations where the need to address resource and environmental issues has been long-recognized.

Initially, it appeared that the proposed program may have overlapped aspects of existing programs offered by the universities of Toronto, Ottawa, Western Ontario and Waterloo. Therefore, in June 1989, the University of Guelph met with the Chairs and Graduate Officers of the Geography departments of these universities to determine whether or not the proposed program was unique, and if not, would it jeopardize the viability of existing programs.

The results of these meetings suggested that the overlap between the proposed program and existing programs was minimal[3], that in some areas Guelph possessed greater strength in certain sub-fields than did the existing programs[4], or that the program was unique in certain respects from existing programs.[5] Guelph reports that "None of the departments visited indicated that they had a problem of excess capacity nor did they express any concern that the Guelph Ph.D. program would have an adverse impact on enrolment in their own programs."

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[2] University of Guelph, Faculty of Graduate Studies and Department of Geography, College of Social Science, PhD Program Geography in Rural Resource Evaluation and Environmental Analysis: Request for Formula Funding Support, June 21, 1988, p.3.

[3] Comments from the University of Toronto, University of Waterloo, University of Western Ontario, and the University of Ottawa.

[4] Comments from the University of Toronto.

[5] Comments from the University of Waterloo, University of Western Ontario, and the University of Ottawa.

Student demand for the program appears to be strong. For the 1989-90 year, 38 serious inquiries were received (from 14 Canadians and 24 non-Canadians). These enquiries resulted in 19 full applications (7 Canadian and 12 non-Canadian). Five students were accepted into the program (all Canadian).[6] Guelph projects an average steady-state admission rate of three to four students per year and an eventual steady-state enrolment of eight to twelve students in residence at a time.

The Academic Advisory Committee is satisfied that there is convincing evidence of societal need and student demand for the proposed program.

3. Consistency with Aims, Objectives and Existing Strengths

The establishment of the proposed PhD Geography program in Rural Resource Evaluation and Environmental Analysis is entirely consistent with the aims and objectives of the University of Guelph, particularly in offering programs related to the stewardship of Canada's natural resources and the preservation and effective management of the nation's resources.[7]

The program is included in the University's five-year graduate plan (1986).

The University of Guelph has based this program on existing faculty expertise and research strengths. The program builds upon existing linkages with graduate programs in Soil Science, Agrometeorology, Agricultural Economics, Economics and Rural Sociology and centres such as the Centre for Soil and Water Conservation and the newly established Chair in Land Stewardship, and the School of Rural Planning and Development.

The Academic Advisory Committee considers the proposed program to be consistent with the aims, objectives and existing strengths of the University of Guelph.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that:

enrolment in the Doctor of Philosophy program in Geography in Rural Resource Evaluation and Environmental Analysis at the University of Guelph be recommended by Council for funding eligibility.

Academic Advisory Committee
December 18, 1989

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[6] University of Guelph, Response to OCUA Letter of March 22, 1989, p.5.

[7] University of Guelph, op.cit., June 21, 1988, p. 6.

Appendix D

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Doctor of Philosophy in Resource and Environmental Economics (PhD)

University of Guelph

New Graduate Program Considered for Funding Eligibility

On July 26, 1989, the University of Guelph requested that Council consider its new doctor of Philosophy program in Resource and Environmental Economics for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on June 16, 1989, this program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies and, at the time of appraisal, did not require any improvements.

2. Societal Need and Student Demand

The proposed program is based on an existing PhD program in Agricultural Economics and Business. The proposed program builds on the field of Resource Economics within this program and adds a specialization in Environmental Economics. The objective of the program is to provide students with a proficiency in theory and quantitative methods comparable to other PhD programs while achieving a degree of unique specialization in Resource and Environmental Economics that is unique in Ontario.[1] Required areas of study include economic theory, resource and environmental economics, quantitative methods and a thesis.

The University of Guelph indicates that this program will produce graduates who will "meet a need for professionals who understand the nature of economic activity and the physical/biological milieu within which it occurs".[2] Graduates would be employed by corporations involved in the resource sector and/or whose activities have environmental implication, in regulatory agencies and in higher education and research. They would also be readily employed by government agencies and regulatory bodies. Thirdly, they would meet a societal need for faculty and research in the area of resource and environmental economics.

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[1] University of Guelph, Ontario Agricultural College, College of Social Science and Faculty of Graduate Studies, Doctor of Philosophy (Ph.D.) in Resource and Environmental Economics, Request for Formula Funding Support, July 26, 1989, p. 4.

An extensive needs survey conducted by the University of Guelph revealed the following:

(i) There is a large market for resource and environmental economists which is expected to increase.

(ii) A number of these economists, currently employed in Canada were trained outside Canada.

(iii) The proposed program would meet the requirements of industry and government.[3]

The Academic Advisory Committee was provided with letters substantiating the societal need for this program from numerous organizations including Petro-Canada Resources, Newfoundland and Labrador Hydro, Canadian Forestry Service, Ontario Ministry of Agriculture and Food, and the Ontario Ministry of Natural Resources.

Two students enroled in the program during the Fall of 1989. The University of Guelph projects a total enrolment of 4 students in 1990, 6 in 1991, 8 in 1992 and the achievement of a steady-state total enrolment of 10 students by 1993. The University of Guelph indicates that demand for the program will be greatest from recent graduates, although some professionals may be attracted to the program in order to upgrade their qualifications.

The University of Guelph expects to experience no difficulty achieving the projected enrolment levels as the program is unique.

The Academic Advisory Committee is satisfied that it has been provided with convincing evidence of both a societal need and student demand for this program.

3. Consistency with Aims, Objectives and Existing Strengths

The University of Guelph has offered a Master's of Arts degree program in Economics for two decades and the program was deemed to be of "good quality" by the Ontario Council on Graduate Studies in 1988. Faculty from the Department of Economics have also supervised doctoral-level work in Economic Theory within the PhD programs offered by Agricultural Economics and Business.

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[2] Ibid., p. 7.

[3] Ibid., p. 8.

The program is consistent with the University of Guelph's stated aims and objectives which include "stewardship of our resources", and its special mandate in the area of agriculture, biological and physical sciences.

The program was included in the University's five-year graduate plan since 1987.

The Committee notes that additional faculty were recently added to the program, and the necessary library and faculty resources are already in place.

The Committee is satisfied that the PhD program in Resource and Environmental Economics is consistent with the aims, objective and existing strengths of the University of Guelph.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that:]

enrolment in the Doctor of Philosophy program in Resource and Environmental Economics at the University of Guelph be recommended by Council for funding eligibility.

Academic Advisory Committee
December 11, 1989

Appendix E

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Master of Engineering in Engineering Management (MEng) University of Ottawa

New Graduate Program Considered for Funding Eligibility

On June 28, 1989, the University of Ottawa requested that Council consider its new Master of Engineering program in Engineering Management for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on September 16, 1988 this program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies and, at the time of appraisal, did not require any improvements.

2. Societal Need and Student Demand

The proposed program developed out of an existing Diploma program in engineering management offered at the University of Ottawa since 1981. The MEng program has been designed primarily for practising engineers and industrial scientists who are able to study on a part-time basis. However, full-time students may be admitted based on their career development needs.

The program consists of 36 credits or 12 courses which may include a 6 credit research project. There is no residency requirement. Core courses include Introduction to Engineering Management, Industrial Organization, Organizational Behaviour, Marketing, Accounting: A Managerial Approach, and Applied Reliability Theory. Electives may be selected in the areas of production management, research and development management or systems management.

This program was designed specifically to meet the need of practising engineers wishing to pursue a program which would upgrade their managerial skills without requiring them to take a generalist MBA program. The Engineering

Management program will offer technical management competence rather than general managerial knowledge and will meet regional needs for technical managerial skills due to the growth of high technology enterprises involved in applied research, development and manufacturing.

The MEng program would be the first graduate bilingual program of its kind in Canada. The University of Ottawa will be the only Ontario university to offer graduate studies in Engineering Management in response to the needs of regional high technology enterprises involved in applied research, development and manufacturing.

Student demand for the program is projected to be strong. The steady-state enrolment is expected to reach 50 students per year. The Committee was provided with numerous letters from students currently enroled in the Graduate Diploma program in Engineering Management indicating their interest in pursuing the MEng program.

The Committee was also provided with an array of letters from individuals, private industry and government in the Ottawa region which substantiated the need for this program.

One individual employed in the public sector, writing in support of the program stated:

> One cannot begin to extol the benefits of such a program within the National Capital Region. Not only would it benefit the private sector but the Department of National Defence maintains all of its major engineering components within Ottawa... there are well over 500 practising engineers in these areas with a voracious appetite for academic upgrading along with Departmental Requirements for Post-Graduate degrees.[1]

The following comments from Cornwall Electric typify the letters of support for the program received from industry:

> There is a real need in Ontario for advanced training in the highly specialized area of Engineering Management. As the world becomes increasingly "high tech" a new generation of management which understands the technology of tomorrow must be trained...Advanced programs in Engineering Management at night, in conjunction with on the job training, provide an ideal way to meet this need. The universities supply the theory while the work place provides the real life experience and the seasoning. Cornwall Electric will encourage its engineering staff

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[1] Letter from Captain Marian Miszkiel, P.Eng, Gloucester, Ontario, April 1987.

to pursue advanced training in Management.[2]

Additional letters supporting the societal need for the program were received from Northern Telecom Electronics Limited, JOMITEK, Supply and Services Canada, the National Research Council - Plant Engineering Services Branch, National Defence Canada, Hydro-electric Commission of the City of Nepean, ELMA Engineering Services Ltd., Hovey Industries Ltd., Leigh Instruments Limited, Transport Canada, Atomic Energy of Canada Limited, Communications Computers and People Company, and Bell Canada - Corporate Engineering (Network Technology) Branch.

The Academic Advisory Committee is satisfied that there exists convincing evidence of both a societal need and student demand for the proposed Engineering Management program at the University of Ottawa.

3. Consistency with Aims, Objectives and Existing Strengths

The University of Ottawa Diploma program is one of the largest graduate-level programs in engineering management in Canada. This program has been offered for Atomic Energy of Canada Ltd. on location in Chalk River for three years. Numerous courses have also been offered on location in Kanata at the request of several large manufacturing corporations. The proposed program builds on the experience and regional support gained from the existing Diploma program.

The Engineering Management program is supported by both the Faulty of Administration and the Faculty of Engineering at the University of Ottawa and benefits from the expertise of their 130 full-time professors.

The University of Ottawa has significant corollary strengths in the areas of Business Administration, Systems Science, Mechanical Engineering (robotics, automation and manufacturing) and houses an Innovation Centre, in addition to existing strengths in Administration to the Master's level and Engineering to the doctoral level.

The program is contained in the five-year graduate plan of the University (1984).

The Academic Advisory Committee is satisfied that the MEng program in Management Engineering is consistent with the aims, objectives and existing strengths of the University of Ottawa.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that

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[2] Letter from G.R. Fairweather, P.Eng, Vice-President and General Manager, Cornwall Electric, April 10 1987.

enrolment in the Master of Engineering program in Management Engineering at the University of Ottawa be recommended by Council for funding eligibility.

Academic Advisory Committee
December 18, 1989

Appendix F

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Master of Information Science (MIS)
University of Toronto

New Graduate Program Considered for Funding Eligibility

On December 14, 1988, the University of Toronto requested that Council consider its new Master of Information Science program for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on February 1, 1988, the program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies. The Academic Advisory Committee notes that the Ontario Council on Graduate Studies required a report on the development of the program to be submitted by September 30, 1990.

The Committee has reviewed the requirements of the report[1] with the University and is satisfied that the program meets Council's first criterion.

2. Societal Need and Student Demand

The Master of Information Science program is offered on a full-time and part-time basis. It consists of four full courses and a research project and can normally be completed in twelve months of full-time study. The University of Toronto indicates that information science is an interdisciplinary study concerned with the nature of information and the manner in which it is created, managed and accessed, especially through the use of computer technology.[2] This unique program will combine knowledge of computing and communication technology with an emphasis on the content of information systems and on the needs and behaviourial patterns of the users of information systems. The University of Toronto indicates that the only other North American program analogous to the MIS is at the University of Pittsburgh.[3]

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[1] Letter of January 19, 1988 from Dr. Maurice Yeates, Executive Vice-Chairman, OCGS to Dr. Rose Sheinin, Vice-Dean, School of Graduate Studies, University of Toronto.

[2] University of Toronto, Faculty of Library and Information Science, Calendar 1988-89, p. 21.

Graduates of the program will design and administer databases, design software for information retrieval, design and provide training and customer support for users, market information services and products, and manage information services and systems.

The University of Toronto indicates that the need for this program has been created by the emergence of the "Information Society" wherein computer systems, information management and human behaviour are intricately linked. The Committee received a great deal of evidence indicating that the need for graduates of this program is strong.

For example, Micromedia Limited indicated that it requires professionals with detailed skills in a number of areas such as the construction, management, publishing, and dissemination of databases; information retrieval techniques; information technologies; and user assistance, and until now there has been no single educational program generating such professionals.
Micromedia concluded its letter to Council by stating:

> It is very encouraging that the MIS program now offers an opportunity for individuals who understand the critical importance of information management to acquire a solid foundation in that area, and an opportunity to hire them.[4]

Organizations such as the Royal Canadian Mounted Police stated:

> The proposed...program appeared to be directly addressing a vacuum in contemporary information science programs caused by a failure to view information technology and information management as components of the same field....My personal prediction is that this new breed of information specialist will be in acute demand through the 1990's in government and large private sector organizations.[5]

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3. University of Toronto, Request for funding eligibility, Master of Information Science Program, December 14, 1988, p. 4.

4. Letter from Ulla de Stricker, Manager, Communications, Micromedia Limited, Toronto, Ontario, December 8, 1989.

5. Letter from P.M. McLellan, Assistant Commissioner, Director, Informatics, December 5, 1989.

A representative of Imperial Oil Limited indicated that

> ...the corporation has launched a massive effort to develop major information management architectures to keep us competitive in the 1990's...it became apparent ...that a new class of professionals would be needed in our corporation to more professionally manage our data and information...We expect that we will need a growing number of such professionals in future to continue to assist us as our information systems continue to grow.
>
> The faculty's Master's programme is uniquely designed to prepare university graduates to be leaders in the growing information management functions in organizations such as ours. We were very pleased to see the university mounting such a timely initiative to address a growing area of need in industry.[6]

Geac, a canadian company and a major supplier of library automation systems to 18 countries indicates that

> The size of the library automation market, and the scope and complexity of the applications continues to increase, so the need for such specialists is far from filled...In the next decade many organizations will require an in-house specialist whose expertise encompasses both computer science and information science. In some countries the economic and social implications of information technology are considered matters of strategic national importance. We believe that the MIS program will contribute to this country's ability to meet the challenge of information technology...[7]

Letters supporting the evidence of a societal need for graduates of this program were also received from the Hudson's Bay Company; Queen's University Associate Dean (Studies), Faculty of Arts and Science; The Graduate School of Library and Information Science, University of California, Los Angeles; Bell Northern Research; International Thomson Information Inc.; the Online Computer Library Center; The Globe and Mail; I.P. Sharp Associates, which donated $25,000 to the program to fund the "Ian P. Sharp Lectureship on Information Science"; and the Canadian Association of Data and Professional Service Organizations (CADAPSO).

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6. Letter from R.S. Milland, Facilities Planning Group Leader, Computing and Telecommunications Div., Information Systems and Technology Dept., Imperial Oil Limited, Toronto, Ontario.

7. Letter from Nick Haley, Vice-president, Geac Canada Limited, Markham, Ontario, December 11, 1989.

On behalf of the Canadian Information Industry, CADAPSO strongly supported the MIS program, noting its belief that "this course is of vital importance to the well-being of the Canadian economy because it strengthens a critical component of information/technology management."

CADAPSO also indicated that

> with every passing year, the demand for these graduates is increasing, not only in the information industry community but in the whole of society. More and more, companies of all kinds are becoming aware of their need to manage information resources in an up-to-date fashion. Graduates of the program in question will be able to assist these companies in achieving this goal. CADAPSO believes that this program will assist both the Information Industry and society to meet the demands of the future.[8]

Student demand for this program appears strong, particularly from employed professionals. A total of 5 full-time students were enroled in September of 1988, an additional 11 students enroled in September 1989 (4 full-time and 7 part-time) and it is possible that as many as 16 more students will commence study in the program in January of 1990 (4 full-time, 12 part-time). The University expects to achieve a steady-state of approximately 25 students by the fourth year of the program (1991).

The Committee is convinced of the societal need and student demand for this program.

3. Consistency with Aims, Objectives and Existing Strengths

The University of Toronto has existing strength in the disciplines of Computer Science and Library and Information Science to the doctoral level, both programs having been designated of "good quality" by the Council of Ontario Universities in 1986 and 1989 respectively.

In 1989, the University of Toronto made two new faculty appointments to the information science program and has updated the computing facilities to better support the program and its research activity. The University notes that LAN software was provided by a grant from Novell, in recognition of the innovative information science programs at the Faculty.

The Master of Information Science program is consistent with the University's aims, objectives and existing strengths in the areas of library, information and computer studies and has been included in the University's five-year graduate plan since 1987.

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[8] Letter from Mrs. Fruji Bull, President, Canadian Association of Data and Professional Service Organizations, Ottawa, Ontario, December 7, 1989.

The Academic Advisory Committee is satisfied that the Master of Information Science program is consistent with the aims, objectives and existing strengths of the University of Toronto.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that:

enrolment in the Master of Information Science program at the University of Toronto be recommended for funding eligibility.

Academic Advisory Committee
December 18, 1989

Appendix G

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Doctor of Social Work (DSW) Wilfrid Laurier University

New Graduate Program Considered for Funding Eligibility

On June 7, 1987, Wilfrid Laurier University requested that Council consider its new Doctor of Social Work Program for funding eligibility. At the time, Council was not in a position to consider the program since it was government policy that doctoral programs at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier universities were not eligible for funding.

During Council's review of policy regarding graduate program planning and funding at the end of the second quinquennium of graduate program planning, the issue of the "doctoral funding ban" at the five above-mentioned institutions was considered.

Within Advisory Memorandum 89-V "Graduate Program Planning and Funding in the Third Quinquennium: 1989-90 to 1993-94" Council indicated that it continued "to believe that the primary mission of these institutions is the establishment of a rational array of strong, high quality undergraduate program offerings"... but that

> this function is not necessarily incompatible with these universities offering a very limited number of doctoral programs, provided that the development occurs in a planned manner, in program areas where there is high quality, student demand, a societal need for graduates, and the programs are subjected to the usual appraisals for academic quality and eligibility for funding.

Council, therefore, recommended that the ban on doctoral program funding at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier universities be rescinded. This advice was accepted by the Minister.

Council subsequently referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on November 21, 1986, the program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies without requiring any improvements. The Academic Advisory Committee notes that a subsequent reappraisal of the quality of the program on February 2, 1989 resulted in the program being deemed to be of "Good Quality".

2. Societal Need and Student Demand

The Doctor of Social Work program has been in operation since 1987. The program emphasizes the development and application of theoretical knowledge, and empirical approaches to research and policy affecting social work practice combined with a thorough examination of a specific field of service such as child welfare, mental health or services for the aged.[1] The program is professionally-oriented and can be highly individualized. It is composed of 10 half-credit courses, a comprehensive examination, and a dissertation. A practicum may be recommended for some students.

The program's objectives are to prepare graduates for leadership positions in academic and professional social work settings; to enable graduates to analyze and evaluate theories and methods of social work practice in a scholarly and critical fashion; to enable graduates to apply social science methods to advance the knowledge and theory of social work practice and to provide graduates with state-of-the-art knowledge about a substantive area within the general social work domain.[2]

There currently exists only three other doctoral programs in Social Work in Canada; at the Universities Laval and Montreal which offer their programs in the French language, and at the University of Toronto.

Wilfrid Laurier University argues that "there is an urgent need for another doctoral program...especially one with a professional rather than a discipline orientation."[3] This claim was substantiated by a report of the Deans and Directors of Canadian Schools of Social Work entitled "Faculty Needs Survey of Canadian Schools of Social Work". This report concluded that without concerted action, the 24 accredited Canadian schools of social work, 10 of which are in Ontario, will soon face a serious shortage of trained PhDs. Based on a survey of the twenty schools of social work in Canada, the report indicated that seventy-six percent of existing, full-time faculty in Canadian schools of social work will reach the retirement age of

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[1] Wilfrid Laurier University, Request for Funding Support for the Doctoral Program in Social Work at Wilfrid Laurier University, July 7, 1987, p.1.

[2] Wilfrid Laurier University, Ibid., p. 2.

[3] Wilfrid Laurier University, Response to OCUA Request for Additional Information, November 9, 1989, p. 1.

65 within the next fifteen years. Seventy-four percent of the schools indicated that they have had difficulty over the last three to five years recruiting new faculty, with a major concern being the lack of qualified Canadians.[4]

The need for an additional doctoral program in Social Work has been evident for many years. Recommendations contained in the 1978 report entitled Appraisal of the Ontario Graduate Social Work Education indicated that:

> the proposed doctoral programme at Wilfrid Laurier be considered the second priority in building up a doctoral training model in Ontario. It would be desirable if this program differed in conception from that of Toronto and avoided duplication.[5]

Six years later, the Advisory Committee on Academic Planning of the Ontario Council on Graduate Studies in its 1984 report Perspectives and Plans for Graduate Studies (Social Work) stated, in response to a concern for the need for diversification in the educational opportunities for doctoral study in Social Work in Canada, that:

> The development of a new DSW programme to complement the existing Ph.D. programme at Toronto may be a good solution to this problem... ACAP supports Dr. Zay's suggestion that doctoral studies be considered, for at least five years, as a priority in social work education in Ontario.[6]

The Ontario Directors and Deans of Social Work strongly support the proposed program. The organization's Chairman indicated that:

> In speaking with colleagues who are currently recruiting for faculty, the difficulty in finding qualified candidates is identified as a growing problem....
>
> The deficit of social work doctorates will unfortunately not be resolved within only a few years. The need is an ongoing one. We believe that more doctorate programs will be needed to truly meet the needs of the social work profession.[7]

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[4] Ibid., p. 1.

[5] Wilfrid Laurier University, op. cit., July 7, 1987, p. 10.

[6] Ibid., pp. 9-10.

[7] Letter from Mr. Richard Carrière, M.S.W., C.S.W., Chairman, Ontario Deans & Directors of Schools of Social Work, January 4, 1990. pp. 1 - 2.

The Ontario Association of Professional Social Workers also indicated their "unequivocal" support for the program, noting in particular that the following features made the program particularly appropriate: the program's location in southern Ontario which is the area of highest demand; its practice orientation, which draws from the largest proportion of social work practitioners; its emphasis on the application of critical analysis and research skills to the practice component of social work, which is greatly needed in the field and is the weakest area of advanced social work at present; the fields of service selected which reflect the highest priority ares of social work practice in Eastern Canada; and its contribution to the supply of Canadian social work doctorates who can contribute to the development of a body of knowledge which reflects the particular social needs of Canadians.[8]

In its submission, Wilfrid Laurier University indicates that the teaching market alone will absorb more than the total number of doctoral graduates from Canadian universities in the foreseeable future due to the overall shortage of qualified candidates and that the demand from other sectors will make the shortage even more severe. The need for social work personnel with doctoral training is also in demand from the social work field wherein the evaluation and restructuring of current national welfare programs is ongoing.

The limited number of places available for doctoral study in Canada has meant that many Canadian students have completed their doctoral training in the United States, France or the United Kingdom. In a field such as social work which is closely linked to particular political policies, the need to educate doctoral candidates in a Canadian milieu is extremely important.

Wilfrid Laurier University indicates that this program is designed to produce graduates who will be qualified to teach at the university level, conduct research, and undertake administration at the most senior levels.[9]

The projected steady-state enrolment for the program was six students per year. This target has been consistently achieved in each of the past three years.

As of Fall 1989, Wilfrid Laurier University has admitted three cohorts of DSW candidates: 7 students in 1987-88, and 6 in each of 1988-89 and 1989-90. The first graduate of the program in expected in the Fall of 1990 with the remainder of the first cohort convocating in May 1991.

The large number of annual inquiries received about the program suggests to the Committee that the demand for this program will continue well into the future.

Sixty-four of all applications received to date have come from within Ontario, 19% from other Canadian provinces and 17% from other countries. The majority of students come from administrative backgrounds or have been directly involved in the practice of social work.

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[8] Letter from Mr. Malcolm J. Stewart, M.S.W., C.S.W., C.A.E., Executive Director, Ontario Association of Professional Social Workers, January 5, 1990, p. 2.

[9] Wilfrid Laurier University, Request for Funding Support for the Doctoral Program in Social Work at Wilfrid Laurier University, July 7, 1987, pp. 8-9.

The Academic Advisory Committee is satisfied that there is convincing evidence of societal need and student demand for the proposed program.

3. Consistency with Aims, Objectives and Existing Strengths

The Doctor of Social Work program is supported by a successful Master's program which has been in place since the mid-1960s. The master's program was recently appraised by OCGS and declared to be of "good quality".

In addition, the MA program in Social-Community Psychology, which supports the DSW program through the provision of courses and faculty for examination purposes, was successfully appraised and declared to be of "good quality" by OCGS on November 1, 1989. Cognate disciplines which offer support for the program include Psychology, Sociology, Economics and Business Administration.

The program has been included in the University's five-year graduate plan since 1987. The faculty and resources necessary to offer the program are in place.

The Academic Advisory Committee is satisfied that the Doctor of Social Work program is consistent with the aims, objectives and existing strengths of Wilfrid Laurier University.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that:

> *enrolment in the Doctor of Social Work program at Wilfrid Laurier University be recommended by Council for funding eligibility.*

Academic Advisory Committee
November 20, 1990

Appendix H

ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

ACADEMIC ADVISORY COMMITTEE

Master of Science in Computer Science (MSc)
York University

New Graduate Program Considered for Funding Eligibility

On July 26, 1989, York University requested that Council consider its new Master of Science program in Computer Science for funding eligibility. Council, according to established procedures, referred the program to its Academic Advisory Committee. The Committee's findings, resulting from the application of Council's criteria for funding eligibility, are summarized below.

1. Academic Appraisal

The Council of Ontario Universities has certified that on November 18, 1989, this program passed a rigorous academic appraisal conducted by the Ontario Council on Graduate Studies and, at the time of appraisal, did not require any improvements.

2. Societal Need and Student Demand

The Master of Science program in Computer Science at York University consists of a minimum of 5 graduate courses (15 credits) chosen from each of the following three areas: Theory of Computing and Scientific Computing; Artificial Intelligence and Interactive Systems and; Systems Hardware and Software. A thesis containing original research results is required.

An optional industrial internship consisting of an 8 to 16 month work term with a major company in the field is also available. Students may choose to participate in the internship program after the completion of their course work and before the completion of their thesis. Students would be encouraged to look for a thesis topic of interest to industry during their internship. The objective of the internship option is to foster the technology transfer of basic research between the university and industry. Positions have been made available to date by IBM Canada and Bell Northern Research.

Unlike the four-month co-op option available within the Master's program at the University of Waterloo, the York internship program of 8 to 16 months is intended to permit the student to participate substantively and actively in medium-scale industrial projects. The University of Waterloo has indicated that its co-op option for Master's students has never been popular and that no students were enroled in 1989-90.[1]

York justifies the societal need for this program primarily on the basis of supply and demand. Computers have clearly penetrated most aspects of the modern workplace and home-life. They have also facilitated the advancement of the frontiers of knowledge in many of the physical sciences and will continue to do so. In fact, the governments of Canada and Ontario, industry and universities have recognized the strategic importance of computer science expertise to Ontario and Canada but are faced with a shortage of highly qualified computer scientists, which is North America-wide.

York indicates that a 1982 U.S. National Science Foundation Report projected that the demand for computer analysts and programmers, which grew at a rate of 4.9% per year in 1982 was expected to increase by 5.8% per year in 1989. By 1990, the predicted shortfall would be more than 30% or over 140,000 personnel.[2]

A 1986 study, cited by York in its submission, indicates that in North America there are only 146 graduate programs in computer science with 9,258 students, compared to 520 graduate programs in the physical sciences with 24,476 students and 1,062 graduate programs in engineering with 53,553 students enroled. This information does not suggest that the current nor emerging societal need for advanced computer science skills will be easily met within the existing array of programs.[3]

In fact, estimates published in 1984 projected that the 1983 supply of new master's graduates in computer science would approximate 6,000 as contrasted with a demand of 34,000 per year in North America and that the need for master's graduates could go unmet well into the 1990s.[4]

The shortage of highly qualified computer scientists in North America has also been brought to the attention of the Academic Advisory Committee during its review of other new program proposals.

In the Canadian context alone there is significant evidence that an insufficient number of new master's graduates in computer science are being produced. The 1985 report cf the National Science and Engineering Research Council (NSERC) indicated that Canada was experiencing a serious shortage of manpower to meet existing research and development efforts and that computer science was an area of acute need both in Canada and world-wide. In recognition of this need, NSERC announced in 1987 that it would offer a differential scholarship award of $1,000 per year to graduate students in computing or engineering.

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[1] York University, Letter to OCUA, December 7, 1989, p. 2.

[2] York University, Request for Formula Funding - M.Sc. Programme in Computer Science, July 26, 1989, pp. 2 - 3.

[3] York University. p. 3, citing D. Gries, R. Miller, R. Ritchie, and P. Young, "Imbalance between growth and funding in academic computing science: Two trends colliding", CACM, vol. 29, pp. 870-878, 1986.

[4] Ibid. p. 3, citing J.W. Hamblen, Computer manpower--supply and demand by States--1984, Quad Data Corp., Tallahassee, Fla., 1984.

York also argues that the regional need for this program is substantial, based on evidence provided by IBM Canada Limited in Toronto. Information provided by IBM shows that the number of master's graduates as a percentage of total hires has increased from 9.0% (14 persons) in 1985 to 22% (44 persons) in 1988 with Master's-level hires reaching 26% or 35 persons as of April 1989.[5]

Comment from Northern Telecom Canada Limited substantiated the evidence suggesting a shortage of computer science graduates with master's degrees:

> ...it is very unusual to find graduates with Masters degrees in Computer Science. Should more students in this discipline be available, we would most certainly be interested in bringing this level of expertise into our organization.[6]

The Industry Internship Program(IIP) has generated significant support from industry as illustrated by the following comments from IBM:

> ..the Industry Internship Programme is very important to the IBM Canada Ltd. Laboratory. Not only does it give us an opportunity to employ talented people for up to 16 months, but this programme is our chance to show these people how advantageous a long-term career with IBM can be. IBM Canada's demand for IIP students has doubled each year in the past two years, and this year we looked for twice as many students as were available.
>
> As we move into the 1990's, our need for highly qualified Computer Science graduates who understand our business is growing dramatically. Through the Industry Internship Programme and close cooperation with Universities such as York, we are confident that these needs can be met.[7]

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[5] Letter from Mr. H.M. Mansikka, Manager, Recruiting and University Relations, IBM Canada Limited, April 4, 1989.

[6] Letter from Ms Susan Ouellette, Manager, University Recruitment and Employment Equity, Northern Telecom Canada Limited, April 27, 1989.

[7] Letter from Mr. Eric Wheeler, Manager, University Relations, IBM Canada Ltd. Laboratory, May 17, 1989.

Not only is this program directed toward the advancement of core technology development and of industrial research, York states that it

> is vital to the development of advanced technology and methodology within many other disciplines in the University... not only in the sciences where such technology has advanced the boundaries of knowledge, e.g. Physics and Chemistry, but also in the social sciences and humanities where the technology is applied to problems related to data collection, manipulation, and investigation vital to maintaining dynamic research endeavours at the University.[8]

Student demand for the program to date has been strong. Six students were enroled in the program on a full-time basis in the Fall of 1989. All six have chosen to pursue the Industrial Internship Option.

York University notes that despite the fact that there are master's programs in computer science already offered at eight other institutions, each year the number of qualified applicants far exceeds the number of students admitted to these programs, often due to insufficient resources.[9] York notes that in the Toronto catchment area there is a large unmet demand for a master's-level education in computer science. Based on application data compiled by the University of Toronto, York notes that the University of Toronto admits less than 20% of the applicants to their program (1984: 173 applications, 26 accepted; 1985: 180 applications, 22 accepted; and 1986: 179 applied, 39 accepted).

Macroindicator Data published by the Council of Ontario Universities indicates that master's level enrolments have been steadily increasing from 214 in 1985 to 271 in 1987, also suggesting an increase in demand.

York University makes the point that Toronto and Montreal, being the two major industrial and population centres in Canada, should experience similar levels of demand for master's programs in computer science. Three Montreal universities enrol 301 full-time and 152 part-time master's students. By contrast, the University of Toronto had only 43 full-time Master's students enroled in 1986. Even if the 88 students enroled at the University of Waterloo are included, the combined total is still significantly less than that of Montreal. This leads York to conclude that the student demand for a master's-level education in computer science has not yet been met in the Toronto area.

The Academic Advisory Committee is satisfied that there is convincing evidence of societal need and student demand for this program.

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[8] York University, Request for Formula Funding-- M.Sc. Programme in Computer Science, July 26, 1989, pp. 5-6.

[9] Ibid., p. 6.

3. Consistency with Aims, Objectives and Existing Strengths

The establishment of a master's program in computer science at York University has been a "top-priority" of academic planning in recent years. The program was included in the university's Five-year graduate plan (1987).

Significant resources have recently been accorded the Department of Computer Science. The number of full-time faculty increased by 46% between 1983 and 1989 and the annual library base budget was increased by $10,000. In 1988, an additional one-time allocation of $10,000 was also made to strengthen the book holdings in computer science.

Further, in 1988, the Computer Science department received $110,000 for the establishment of an artificial intelligence and graphics laboratory. The department has also more than doubled its grant funding from NSERC in recent years from $59,542 in 1986 to over $135,000 in 1989.

Finally, York's involvement in the Institute for Space and Terrestrial Science (ISTS), a provincial center of excellence, through its Centre for Research in Earth and Space Science offers students a distinctive opportunity to engage in computer research projects that have applications in space science.

Specific faculty research interests also will enable graduate students to conduct research in the areas of computer vision, parallel compilers, parallel machine architectures for image processing, computer vision, robotics, and the computational aspects of VLSI.

The Committee is satisfied that the Master of Computer Science program is consistent with the aims, objectives and existing strengths of York University.

4. Funding Recommendation

The Academic Advisory Committee, therefore, recommends to Council that:

enrolment in the Master of Science program in Computer Science at York University be recommended by Council for funding eligibility.

Academic Advisory Committee
December 18, 1989

OCUA Public Meetings 1989-90

OCUA Public Meetings 1989-90

Date	Location and Participants
April 7, 1989	**University of Toronto, Toronto** Council of Ontario Universities
April 21, 1989	**Ontario Council on University Affairs, Toronto** Confederation of Ontario Part-time University Students Carleton University
April 28, 1989	**Algoma College, Sault Ste. Marie** Lakehead University Laurentian University Algoma College Hearst College Nipissing College
May 11, 1989	**York University, Toronto** York University Brock University University of Guelph Ryerson Polytechnical Institute Ontario Institute for Studies in Education
May 12, 1989	**York University, Toronto** University of Toronto McMaster University Confederation of University Staff Associations University of Waterloo
May 19, 1989	**University of Windsor, Windsor** University of Western Ontario Wilfrid Laurier University University of Windsor
June 9, 1989	**Trent University, Peterborough** Trent University University of Ottawa Queen's University
June 16, 1989	**Ontario Council on University Affairs, Queen's Park, Toronto** Ontario College of Art Ontario Federation of Students Ontario Confederation of University Faculty Associations

OCUA Recommendations and Government Responses, 1989-90

OCUA Recommendations and Government Responses, 1989-90

Recommendation	Title	Response
	Advisory Memorandum 89-I	
89-1	Eligibility of Enrolment in the Bachelor of Commerce Major Program in Agricultural Business at the University of Guelph for funding purposes in 1989-90	Accepted
89-2	Eligibility of Enrolment in the Bachelor of Arts, Honours Applied Linguistics and Honours Theoretical Linguistics Programs at Carleton University for funding purposes in 1989-90	Accepted
89-3	Eligibility of Enrolment in the Four-Year General Bachelor of Arts Program at the University of Waterloo for 1989-90	Accepted
89-4	Eligibility of Enrolment in the Bachelor of Arts Program in Honours Italian Language and Literature at the University of Windsor for funding purposes 1989-90	Accepted
89-5	Eligibility of Enrolment in the Honours Bachelor of Social Science, Leisure Studies Program at the University of Ottawa for funding purposes 1989-90	Accepted
89-6	Eligibility of Enrolment in the Bachelor of Commerce, Marketing Major Program at the University of Guelph for funding purposes in 1989-90	Accepted
89-7	Eligibility of Enrolment in the Bachelor of Science Major Program in Resources Management at the University of Guelph for funding purposes in 1989-90	Accepted
89-8	Eligibility of Enrolment in the Bachelor of Science (Agriculture) Major Program in Agronomy at the University of Guelph for funding purposes in 1989-90	Accepted
89-9	Eligibility of Enrolment in the Bachelor of Science (Agriculture) Major Program in Animal Production at the University of Guelph for funding purposes in 1989-90	Accepted

Recommendation	Title	Response
89-10	Eligibility of Enrolment in the Bachelor of Engineering Program in Mechanical Engineering, Concentration in Computer Integrated Manufacturing, at Carleton University for funding purposes in 1989-90	Accepted
89-11	Eligibility of Enrolment in the Bachelor of Engineering Program in Civil Engineering, Concentration in Management, at Carleton University for funding purposes in 1989-90	Accepted
89-12	Eligibility of Enrolment in the Bachelor of Science (Agriculture) Major Program in Crop Protection at the University of Guelph for funding purposes in 1989-90	Accepted
89-13	Eligibility of Enrolment in the Bachelor of Science (Agriculture) Major Program in Horticultural Science and Business at the University of Guelph for funding purposes in 1989-90	Accepted
89-14	Eligibility of Enrolment in the Honours Bachelor of Accounting Program at Brock University for funding purposes in 1989-90	Accepted
89-15	Eligibility of Enrolment in the Honours Bachelor of Business Administration Program at Laurentian University and its Affiliated Colleges - Algoma, Nipissing and Hearst for funding purposes in 1989-90	Accepted
89-16	Eligibility of Enrolment in the Bachelor of Social Science, Concentration in Leisure Studies Program at the University of Ottawa for funding purposes in 1989-90	Accepted
89-17	Eligibility of Enrolment in the Honours Bachelor of Arts Program in Criminology at the University of Windsor for funding purposes in 1989-90	Accepted
89-18	Eligibility of Enrolment in the Combined Bachelor of Arts Program in Labour Studies at Brock University for funding purposes in 1989-90	Accepted

Recommendation	Title	Response
89-19	Eligibility of Enrolment in the Bachelor of Arts Honours BA Double Major Labour Studies Program at York University for funding purposes in 1989-90	Accepted
89-20	Eligibility of Enrolment in the Bachelor of Commerce Major in Management Economics - Industry and Finance Program at the University of Guelph for funding purposes in 1989-90	Accepted
89-21	Eligibility of Enrolment in the Bachelor of Engineering Program in Aerospace Engineering at Carleton University for funding purposes in 1989-90	Accepted
89-22	Eligibility of Enrolment in the Honours Bachelor of Science Program in Biology and Pharmacology at McMaster University for funding purposes in 1989-90	Accepted
89-23	Eligibility of Enrolment in the Bachelor of Engineering Program in Environmental Engineering at the University of Windsor	Accepted
89-24	Eligibility of Enrolment in the Bachelor of Health Science Program in Health Administration at the University of Toronto for funding purposes in 1989-90	Accepted
89-25	Eligibility of Enrolment in the Bachelor of Arts Program in Library and Information Studies at Lakehead University for funding purposes in 1989-90	Accepted
	Advisory Memorandum 89-II	
89-26	Incremental Funding for Increased Enrolment due to the flow-through impact of current intake into Ontario Universities	Accepted
89-27	Distribution mechanism with respect to Formula Grants, Formula Fees and Extra-Formula Grants for Implementation for the funding year 1990-91	Accepted

Recommendation	Title	Response
	Advisory Memorandum 89-III	
89-28	Differentiation Grant for Trent University 1989-90	Accepted
89-29	Northern Ontario Operations Grants 1989-90	Accepted
89-30	North Ontario Mission Grants 1989-90	Accepted
89-31	Bilingualism Grants 1989-90	Accepted
89-32	Extraordinary Funding Grant for Algoma College 1989-90	Accepted
89-33	Research Overheads/Infrastructure Funding Grants 1989-90	Accepted
89-34	International Graduate Student Differential Fee Waiver Support 1989-90	Accepted
89-35	Formula Grant Allocation for 1989-90	Accepted
	Advisory Memorandum 89-IV	
89-36	Differentiation Grant for Trent University for 1989-90 and Beyond	Accepted
	Advisory Memorandum 89-V	
89-37	Funding Criteria for New Graduate Programs Commencing May 1, 1989	Accepted
89-38	Rescinding the ban on Doctoral Program Funding at Brock, Lakehead, Laurentian, Trent and Wilfrid Laurier Universities	Accepted
	Advisory Memorandum 89-VI	
89-39	Government Operating Grants for 1990-91 to meet the cost of Council's basic objectives in Funding provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College	Not Accepted

Recommendation	Title	Response
89-40	Formula Fee Rates for 1990-91 to meet the cost of Council's Basic Objectives	Not Accepted
89-41	Government Grants for 1990-91 to Support Educational Excellence in provincially-assisted universities and their affiliated colleges, Ryerson Polytechnical Institute, the Ontario Institute for Studies in Education, the Ontario College of Art, and Dominican College	Not Accepted
89-42	Formula Fee rates for 1990-91 to Support Educational Excellence	Not Accepted
89-43	Level of Support for Major Repairs, Renovations, Alterations and Replacement Projects in 1990-91 for the cyclical renewal of the Existing Capital Stock	Not Accepted
89-44	Level of Support for Deferred Maintenance of Physical Plant in 1990-91	Not Accepted
89-45	Additional Funding for the Incremental Costs of Bilingualism Programs	Not Accepted
	Advisory Memorandum 89-VII	
89-46	Eligibility of Enrolment in the Pre-Service French Language Bachelor of Education - Intermédiaire and Supérieur Program at Laurentian University for funding purposes in 1989-90	Accepted
	Advisory Memorandum 89-VIII	
89-47	Ontario Graduate Scholarship Stipends in 1990-91	Accepted
89-48	Number of general Ontario Graduate Scholarships for 1990-91	Not Accepted
89-49	Supplementary Ontario Graduate Scholarships	Not Accepted
89-50	Ontario Graduate Scholarships to Persons on Student Visas in 1990-91	Accepted

Recommendation	Title	Response
	Advisory Memorandum 89-IX	
89-51	Eligibility of Enrolment in the Bachelor of Science in Engineering Major Program in Engineering Systems and Computing at the University of Guelph for funding purposes in 1990-91	Accepted
89-52	Eligibility of Enrolment in the Bachelor of Science in Engineering Major Program in Environmental Engineering at the University of Guelph for 1990-91	Accepted
89-53	Eligibility of Enrolment in the Bachelor of Science in Engineering Major Program in Food Engineering at the University of Guelph for 1990-91	Accepted
89-54	Eligibility of Enrolment in the Bachelor of Engineering and Computer Systems Program in Civil Engineering and Computer Systems at McMaster University for 1990-91	Accepted
89-55	Eligibility of Enrolment in the Honours Bachelor of Science Program in Geography and Environmental Science at McMaster University for 1990-91	Accepted
89-56	Eligibility of Enrolment in the Honours Bachelor of Arts Program in Geography and Environmental Studies at McMaster University for 1990-91	Accepted
89-57	Eligibility of Enrolment in the Bachelor of Education Program in the Senior Division at Nipissing College, Laurentian University for 1990-91	Accepted
89-58	Eligibility of Enrolment in the Bachelor of Applied Science Program in Computer Engineering at the University of Toronto for 1990-91	Accepted
89-59	Eligibility of Enrolment in the Bachelor of Arts (Ordinary) Program in Health Studies at York University for 1990-91	Accepted

Recommendation	Title	Response
	Advisory Memorandum 89-X	
89-60	Eligibility of Enrolment in the Master of Arts in Drama Program at the University of Guelph for funding purposes in 1990-91	Accepted
89-61	Eligibility of Enrolment in the Doctor of Philosophy program in Applied Mathematics and Applied Statistics at the University of Guelph for funding purposes in 1990-91	Accepted
89-62	Eligibility of Enrolment in the Doctor of Philosophy Program in Geography in Rural Resource Evaluation and Environmental Analysis at the University of Guelph for funding purposes in 1990-91	Accepted
89-63	Eligibility of Enrolment in the Doctor of Philosophy program in Resource and Environmental Economics at the University of Guelph for funding purposes in 1990-91	Accepted
89-64	Eligibility of Enrolment in the Master of Engineering Management at the University of Ottawa for funding purposes in 1990-91	Accepted
89-65	Eligibility of Enrolment in the Master of Information Science Program at the University of Toronto for funding purposes in 1990-91	Accepted
89-66	Eligibility of Enrolment in the Doctor of Social Work Program at Wilfrid Laurier University for funding purposes in 1990-91	Accepted
89-67	Eligibility of Enrolment in the Master of Science Program in Computer Science at York University for funding purposes in 1990-91	Accepted
89-68	Eligibility of Enrolment in the Doctor of Philosophy Program in Industrial Engineering at the University of Windsor for funding purposes	Accepted

Response to Advisory Memorandum 89-II

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June 15, 1989

Dr. H.V. Nelles
Chairman
Ontario Council on University Affairs
7th Floor, 700 Bay Street
Toronto, Ontario
M2H 2T8

Dear Dr. Nelles:

Thank you for your letter of March 30, 1989 in which you enclosed Advisory Memorandum 89-II, "Modification of the Operating Grants Formula". The advice contained in this memorandum reflects both extensive consultation with the institutions concerned and thorough analysis.

As you are aware, I asked the council on April 20, 1988 to provide advice on a new approach to funding for 1990-91 and future years. I indicated my agreement with the council's view that there should be a thorough and consultative review involving the university community with respect to the university funding mechanism for 1990-91 and beyond. I asked that this consultation take place in the context of the government's strong commitment to accessibility and excellence balanced by sound fiscal management.

I believe the council's advice and recommendations address my specific request that the council:

".....advise me on a new approach to funding for 1990-91 which takes into account enrolment growth in 1989-90 and previous years and which will promote a co-ordinated and planned approach to future enrolment growth".

I am pleased to advise you that the government has accepted the advice contained in the Advisory Memorandum.

The government appreciates that the universities have accommodated significantly larger first-year classes in 1987 and 1988 in response to the government's accessibility initiatives. The government recognizes that the "flow-through" of these larger first-year enrolments and the maintenance of first-year admissions at the 1988 level will result in overall enrolment increases for the next number of years and that this will strain university capacity.

The modified operating grants formula proposed by the council will be implemented as recommended by the council in the 1990-91 fiscal year. Implicit in the acceptance of this advice is the government's commitment to provide the additional funding to fund the flow-through of the growth in enrolment which has taken place since the base year period established for the current formula (1983-1986).

When fully implemented the new basic operating grants envelope funds (which will combine the current basic grants envelope, the accessibility envelope and the new funds committed by the government) will be distributed on a constant share basis as long as institutions maintain their five-year moving average enrolments within a range of three percent above or below their newly established base enrolment levels. The remaining envelopes established in 1987-88 will continue to function in their current form.

During the transition period, institutions that wish to maintain intakes at the recent, higher levels on a permanent basis, and move to new base enrolment levels, will receive funds from the existing accessibility envelope and the newly committed funds, transferred to their basic grant allocations in accordance with the council's recommendation.

Should actual BIU levels reach the levels estimated by the council over the transition period the additional funding recommended by the council will be provided. I am pleased to advise you that, as the first step in the process, up to $46.7 million will be provided in 1990-91. Amounts in the five succeeding years will be determined on the basis of Advisory Memorandum 89-II which indicates that up to $91 million, including the above noted $46.7 million, will be required. These funds will be provided over and above base increases.

On the basis of the government's acceptance of the council's advice and the above noted funding commitment, it is my expectation that the institutions will respond positively to applications for first-year admission in 1989 with a view to maintaining the high level of first year admission achieved in 1988. I would request that the council initiate as expeditiously as possible the corridor negotiation process outlined in the advisory memorandum.

The government also accepts the council's recommendation for the provision of strategic program corridor changes in program areas that are deemed by the government to be of strategic importance where extraordinary enrolment increases are required.

Finally, the government accepts the council's recommendations in relation to the accommodation of future accessibility demands if system level total BIU's increase by greater than 3% above the new base BIU levels, and if this level is maintained for a three-year period.

I wish to thank you and the other members of the council once again for the advice contained in Advisory Memorandum 89-II and for your efforts in the consultations process which led to it.

Yours truly

Lyn McLeod
Minister

Response to Advisory Memorandum 89-III

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June 15, 1989

Dr. H. V. Nelles
Chairman
Ontario Council on University Affairs
7th Floor, 700 Bay Street
Toronto, Ontario
M2H 2T8

Dear Dr. Nelles:

I would like to thank you and the members of the council for the advice presented in Advisory Memorandum 89-III, "The Allocation of the Government's Operating Support for the University System in 1989-90".

I am pleased to advise you of my acceptance of the council's advice for distribution of the $1,478,771,000 according to the operating grants formula recommended in Advisory Memorandum 86-VII. I note that $99,000 has been reserved as a contingency provision; the unused portion of this amount and any other funds unallocated at the end of the fiscal year will also be distributed according to this allocation mechanism.

I am also pleased to accept the council's advice on the various components of the Mission-related Institution-specific funding envelope. The differentiation grant for Trent University will be $1,590,000 for 1989-90.

The Northern Ontario Operations Grants will total $7,454,000, allocated as recommended. The Northern Ontario Mission Grants will remain at $3,000,000 until the council can complete an evaluation of the value and effectiveness of the projects undertaken.

The regular bilingualism grants for 1989-90 will total $21,394,000, allocated as recommended, based on the council's recently completed study on the 1987-88 costs of bilingualism.

The extraordinary funding grant of $760,000 for Algoma College is accepted, subject to Algoma's agreement to the conditions outlined in Advisory Memorandum 88-VII.

The allocation of $6,871,00 in Program Adjustment Funding according to the carry-forward needs of the projects initiated in 1988-89 is accepted.

I also accept the council's advice that the Research Overheads/Infrastructure Funding Grants for 1989-90 be made available according to the mechanism recommended in Advisory Memorandum 87-XV. I note, however, that in my letter of April 29, 1988, I asked council to include the Research Overhead/Infrastructure Envelope in its review of the overall funding mechanism for 1990-91 and beyond. It would be appreciated if the council could review the mechanism recommended in Advisory Memorandum 87-XV, to ensure that it is compatible with the modified formula recommended in Advisory Memorandum 89-II.

International Graduate student differential fee waivers will be distributed according to the slip-year three year average of full time graduate enrolment, as confirmed in Advisory Memorandum 88-V. The value of each waiver will be $5,434 as recommended. The distribution of the 1989/90 waivers by institution which was originally provided to the council contained errors in calculation. The universities were advised of the corrected distribution on June 8, 1989. The distribution of funds associated with the waiver program shown in the attached preliminary summary of university operating grants reflects the corrections made, and therefore differs slightly from the distribution advised by council.

For your information, the distribution of the $20,752,000 in funds for Faculty Renewal and the preliminary distribution of the $84,000,000 in regular accessibility funding are detailed in the attached summaries, along with the distribution of the $4.0 million from the accessibility envelope for which the council provided advice in Advisory Memorandum 88-IX, "Enhancing Access for Disabled Students to Ontario Universities".

I have noted council's "regret that operating grants increased by only 4.3% in 1989/90." As set out in my letter to you of December 13, 1988, however, operating grants, which include funding for accessibility, faculty renewal and special purpose grants, increased by $116.2 million or 7.5% over the total allocation for 1988/89.

Thank you again for the allocative advice provided in Advisory Memorandum 89-III.

Yours sincerely

Lyn McLeod

Lyn McLeod
Minister

Response to Advisory Memorandum 89-VI

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November 29, 1989

Dr. H. V. Nelles
Chairman
Ontario Council on University Affairs
7th Floor, 700 Bay Street
Toronto, Ontario
M2H 2T8

Dear Dr. Nelles,

I am writing at this time to indicate the government's allocation of operating support for universities and related institutions in 1990-91. In establishing the operating grant level and the programs which will be supported, the government has considered very carefully the advice provided to me by the council in Advisory Memorandum 89-VI, "Government Support of the University System in 1990-91". The representations of various groups in the university sector have also been taken into consideration.

This government has made it a priority to provide substantial support to the universities and related institutions. In 1986-87, in addition to a 4% increase in basic operating support, we allocated an additional $50 million to the university sector, in the form of the University Excellence Fund. For 1987-88, we increased basic operating support by a further 4% and total operating support by 7.3%, including a long-term commitment to a faculty renewal program which will provide funding to the university system through to 1994-95. An additional $5,000,000 was added for the international graduate student fee differential waivers program during the fiscal year, to bring the total university operating grants in 1987-88 to $1,447,500,000.

In 1988-89 the above-noted enrichments were included in the base, to which a 7.4% increase was applied, bringing the total 1988-89 operating grants to $1,554,400,000 (including $36.4 million in accessibility funding).

For 1989-90, a total of $1,670,800,000 (including $88.0 million in accessibility funding) in operating grants to the universities and related institutions was allocated.

I am pleased to announce that the government has allocated a total of $1,804,800,000 in operating grants to the universities and related institutions for 1990-91. This represents an increase of $134 million, or 8.0%, over the allocation for 1989-90 and it includes some significant enrichments.

In particular, the 1990-91 enrichments include $46.7 million in transitional funding which was committed by my predecessor in June, 1989. As you know, these funds were committed to assist the transition to planned new higher enrolment levels. This specific amount was based on the council's estimates of transitional funding requirements assuming the flow through of recent enrolment increases and 1989 first year registrations at the 1988 level. In view of the increase in 1989 first year registrations over fall 1988 levels, I am pleased to advise that an additional $4.7 million has been allocated. Together, these enrichments amount to $51.4 million, to assist the progression to new higher enrolment levels.

In this respect, I look forward to receiving the council's advice in relation to proposed new institutional corridor mid-points upon completion of the corridor negotiation process.

The amount from the total operating support that will be reserved for special purpose grants is $14,300,000. This includes an allocation of an additional $4.5 million for special French Language initiatives, including the start-up and development of new French language courses and programs, and their maintenance.

The total allocation for French language and bilingual programs in 1990-91 is $29.8 million, an increase of $5.6 million, or 23 per cent, over the $24.2 million allocation for 1989-90.

The Faculty Renewal program for 1990-91 will require a total of approximately $25.0 million to fund the 500 faculty positions that will be supported in 1990-91. This amount represents a 20.8% increase over the $20.7 million allocated to the program in 1989-90 and is based on the following 1990-91 support levels:

247 positions (approved in 1986-87) at $51,733;
50 positions (approved in 1987-88) at $50,576;
71 positions (approved in 1988-89) at $49,227;
70 positions (approved in 1989-90) at $47,915; and
62 positions (to be appointed in 1990-91) at $46,637;
500 positions in total.

I would ask that the council inform me of its recommendations with respect to any changes in approved Faculty Renewal plans at the earliest opportunity.

I would appreciate receiving the council's advice on the distribution of the $1,630,060,248 available for the Basic Operating Grants Envelope, the Mission-Related Institution-Specific Envelope, including bilingual grants, northern and special northern grants, differentiation and extraordinary grants, the Research Overheads Envelope, the Program Adjustment Envelope, the international graduate student fee differential waivers program and the improvement of access for the disabled as well as the $135,400,000 allocated for accessibility and transition to new higher enrolment levels.

The standard (formula) fee rates for 1990-91 will be increased by 8.0%, a percentage increase equivalent to the operating grant increase. This increase will take effect May 1, 1990 and applies to domestic and international tuition fee rates.

Capital support allocated for 1990-91 will amount to $77.7 million and will be advanced to the universities and related institutions near the end of the 1989-90 fiscal year. The details of the capital support allocations will be announced in the near future.

I will also announce, in the near future, the 1990-91 funding level for the Ontario Student Assistance Program (OSAP). The new fee levels will be considered as eligible expenditures in the calculation of student assistance entitlements.

I would like to thank the council for the advice tendered in Advisory Memorandum 89-VI, and I look forward to receiving the results of your further deliberations with respect to these matters.

Yours sincerely,

Sean Conway
Minister

Response to Advisory Memorandum 89-VIII

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May 31, 1990

Dr. H.V. Nelles
Chairman
Ontario Council on University Affairs
700 Bay Street
7th Floor
Toronto, Ontario
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Viv:

Dear ~~Dr.~~ Nelles,

I am writing to update you on the ministry's response to the Ontario Council on University Affairs' (OCUA) Advisory Memorandum 89-VIII, "The Ontario Graduate Scholarship Program 1990-91".

I am pleased to inform you that the ministry has accepted OCUA recommendation 89-47 regarding the value of the 1990-91 Ontario Graduate Scholarship (OGS). The value of a 1990-91 OGS will be $3,766 per term.

Ministry staff are presently reviewing the implications of recommendations 89-48 (increasing number of scholarships from 1,200 to 1,300 per year) and 89-49 (targeted doctoral student awards). I anticipate that a decision on these recommendations will be made prior to the start of the 1991-92 OGS program year.

The ministry also accepts OCUA recommendation 89-50 and, consequently, 60 scholarships for visa students will continue to be awarded in 1990-91.

Please be assured that the ministry will give careful consideration to the remaining recommendations.

Yours sincerely,

Sean

Sean Conway
Minister